Unanticipated Outcomes of a Telehealth Pilot Project in Skilled Nursing Facilities Care: Don't Put the Cart Before the Course

Sponsored by the
California Emerging Technology Fund

Evaluation Report

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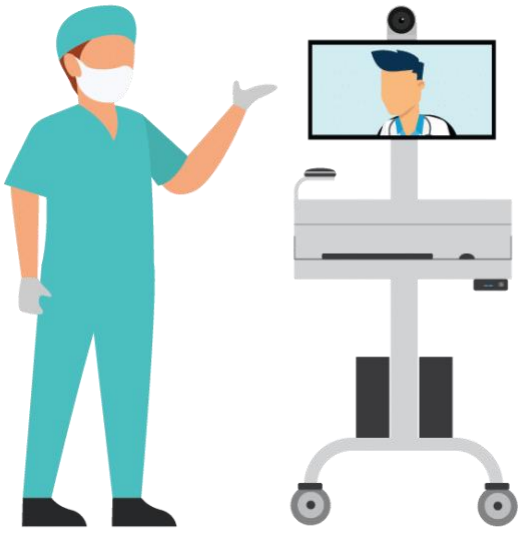

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Preface from the Sponsor

The California Emerging Technology Fund (CETF) sponsored and funded the Skilled Nursing Facilities (SNF) Telehealth Pilot Project. The mission of CETF is to close the Digital Divide in California. CETF works at the intersection of digital access and quality healthcare through Telehealth. The COVID-19 pandemic made it abundantly clear that broadband access is essential for all Californians. ("Broadband" is a generic term in State law for high-speed Internet infrastructure, including both wireline and wireless networks). The public health emergency (PHE) lockdowns made it impossible to ignore digital access vulnerabilities and the impacts on California's unserved and underserved communities. Thus, COVID-19 underscored that access to broadband Internet ***is*** a social determinant of health. Further, the Digital Divide is a manifestation of the Economic Divide rooted in systemic racism.

CETF is committed to being part of a strategy to fight the suffering and death of residents and staff in long-term care facilities due to the COVID-19 pandemic. Early media reports out of New York, which was the first state to be hard hit by COVID-19 – left viewers with haunting images of that state's skilled nursing facilities. On March 24, 2020, the CETF Board of Directors called a Special Meeting to discuss the CETF response to the COVID-19 crisis. After a vigorous discussion, the Board decided unanimously that the imperative for adequate broadband infrastructure and provider capacity to deliver Telehealth services – coupled with the requirement for experienced leadership – warranted CETF action at this time. The initial emphasis would focus on skilled nursing facilities (SNFs) and senior congregate care residential complexes.

CETF, a non-profit directed by the California Public Utilities Commission to be established in 2005, provides leadership statewide to close the Digital Divide by accelerating deployment and adoption of broadband Internet for underserved and unserved communities across California. CETF success has been due to effective leadership with state and national advisors required to identify gaps and to propose solutions affecting California. CETF has been working to secure large-scale support and funding to design and deploy Telehealth services in long-term care facilities across California.

<u>Telehealth Fact-Finding Listening Conferences</u>

CETF conducted 2 Telehealth Fact-Finding Listening Conferences in late 2020 to understand the status of Telehealth in California, identify the gaps and barriers to optimizing Telehealth to improve the health status for Californians, and gather input to inform an Action Plan that will advance Telehealth policy and funding in California. The Fact-Finding Listening Conferences brought together thought leaders and experts from Community Clinics and Federally Qualified Health Centers (FQHC) Serving Medically-Underserved Populations, Senior Care Facilities (Skilled Nursing Facilities and Assisted Living Complexes), Managed Health Care Plans (Public and Private), Medical Centers, and Veterans Affairs Administration, as well as the Governor's Office, State Agencies, Legislature, Regional Broadband Consortia, Community-Based Organizations, and Philanthropy.

The Final Report highlighted significant findings, including that Telehealth utilization rates increased exponentially during the pandemic letting the proverbial "genie out of the bottle." This provides the opportunity to reimagine the way healthcare is delivered and make healthcare systems fairer for everyone while improving patient outcomes and increasing overall population health.

The Final Report Action Plan Framework sets forth 3 over-arching recommendations:

- Enact legislation to permanently reimburse Telehealth services comparable to in-person visits.
- Invest in and ensure ubiquitous high-speed Internet infrastructure to support Telehealth for all patients and providers.
- Institutionalize Telehealth with accountability for improving patient outcomes and overall population health.

The Fact-Finding Conferences were inclusive of key stakeholders essential to contributing to the body of knowledge to advance Telehealth in California. To review the Final Report, ***Delivering on the Promise of Telehealth to Improve Health Outcomes***[1], click on the link in the footnote below.

The Telehealth Pilot Project

Early in the pandemic, CETF recognized the urgency of demonstrating the efficacy of Telehealth in Skilled Nursing Facilities (SNFs) to address COVID-19 and allocated funding for a Pilot Project with 5 SNFs, which launched October 2020 and concluded in June 2022[2]. The Telehealth Pilot Project provided Telehealth equipment and staff training for the 5 senior care facilities[3] to demonstrate the effectiveness of Telehealth in reducing the spread of COVID-19 among patients and staff. The CETF purpose in sponsoring this Telehealth Pilot Project is to provide the data to drive State and federal policy and inform funding.

In an effort to cast a wide net of interested facilities and to prioritize non-profit facilities, CETF reached out to statewide trade associations and organizations to ensure as much geographic and ethnic diversity reflective of California, including rural, urban, suburban, and with emphasis in the Central Valley, Inland Empire and other under-resourced and under-served regions. Statewide organizations that assisted with outreach included Partners in Care Foundation, California Association of Health Facilities, California Association of Long-Term Care Medicine, LeadingAge California, California Assisted Living Association and others – to announce this opportunity. Over 25 potential facilities were referred to CETF for follow up and/or expressed interest in participating in the Pilot Project. The criteria were simply readiness to participate in the Pilot

[1] ***Delivering on the Promise of Telehealth to Improve Health Status***, can be found at this link: https://www.cetfund.org/wp-content/uploads/2021/04/Delivering-on-the-Promise-of-Telehealth-to-Improve-Health-Status-in-California-Final-Report-and-Action-Plan_210409.pdf.

[2] Initially the Telehealth Plot Project was scheduled to be a 16-month Pilot Project beginning October 2020; however, due to COVID-related implementation delays – i.e., staffing issues, mandated testing requirements and COVID outbreaks – the timeline was extended to June 2022.

[3] The Pilot Project consisted of 4 skilled nursing facilities (SNFs) and 1 assisted living facility (ALF).

Project to implement Telehealth in a long-term care facility – preferably a skilled nursing facility – and a willingness to collect data, information and lessons learned to inform replication, public policy and funding. Each facility received Telehealth equipment free of cost[4], received training on the equipment, project support from CETF staff and consultants, and participated in monthly Learning Community Meetings to support Pilot Project partners throughout implementation and for moral support in the midst of the pandemic.

In addition, CETF had the unique opportunity to partner with Dr. Glen Xiong, M.D., C.M.D., who specializes in Internal Medicine and Psychiatry at U.C. Davis Health. Dr. Xiong served as the Chief Medical Advisor to the Pilot Project. Dr. Xiong's clinical interests and expertise include: Memory Care, Post-Acute and Long-term Care, and Neuropsychiatry. Dr. Xiong is nationally and internationally recognized for his medical expertise and research in Telehealth, with funding from the National Institute of Health. Dr. Xiong's philosophy of care is one where he engages patients with a patient-centered, jargon-free, and collaborative approach. He brings family members in as part of the treatment to gain a holistic understanding of his patients. Dr. Xiong was an extraordinary collaborator and partner in this Pilot Project who participated in all major activities, advised on course-corrections and generously provided one-on-one support to facilities as needed.

Skilled nursing facilities (SNF) across the country were overwhelmed by COVID-19. The devastating images and reports by the media demonstrated how residents and staff in SNFs continued to be exposed to or infected by COVID-19 at alarming rates leading to severe illness and death. Over the past 2 ½ years, over 750,000[5] older Americans have died due to COVID-19. In 2020 alone, there were nearly 170,000[6] more deaths in nursing homes than would have historically been expected. In California[7], over 100,000 SNF residents and over 100,000 SNF staff were diagnosed with COVID-19. Importantly, staff in SNFs unfortunately can be transmission vectors to the general community by potentially infecting their families and other community contacts, so reducing their exposure to COVID-19 patients in SNFs has a substantial secondary benefit: reducing community transmission of the virus. This Telehealth Pilot was in response to the impact COVID-19 was having on residents and staff in these facilities.

Residents deserve and require timely access to health services to identify health problems and to be able to receive appropriate treatment. The implementation of Telehealth services into SNFs will allow residents to access healthcare without delay and avoid being transferred and transported by ambulance unnecessarily. Telehealth also lowers the risk of COVID-19 for SNF staff. Because the Centers for Medicare and Medicaid (CMS) temporarily eliminated the regulations that in the past were an impediment to implementation of Telehealth in SNFs, Telehealth is now being

[4] Based on best practices and under the advisement of Dr. Glen Xiong, Chief Medical Advisor to this project, Telehealth carts were assigned based on 1 cart per 50 beds.

[5] Centers for Disease Control and Prevention. Accessed at https://www.cdc.gov/coronavirus/2019-ncov/index.html

[6] OIG, COVID-19 Portal. Accessed at https://oig.hhs.gov/oei/reports/OEI-02-20-00490.asp. U.S. Department of Health and Human Services, Office of Inspector General. June 2021, OEI-02-20-00490.

[7] California Department of Public Health, COVID-19 Portal. Accessed at https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/SNFsCOVID_19.aspx

recommended by both the State and federal governments to identify, diagnose and treat COVID-19 patients. Telehealth is required to provide access to health services and avoid spread of the virus, including and especially in SNFs.

CETF aspires to provide its years of experience and knowledge to become part of the solution in the battle to fight the COVID-19 epidemic and future public health and medical care crises. The expansion of Telehealth in SNFs is vitally required to combat COVID-19 and CETF is committed to helping California develop foundational policy and implement effective practices.

In practice, pilot projects are designed to explore and test the viability of a full-scale project, along with providing other key insights. This Pilot Project was no different. This report outlines findings both anticipated and unanticipated. However, in short, it is critical to highlight 2 key findings from this study that are essential to advancing Telehealth:

- Prevent Emergency Transfers. Telehealth prevented nearly 20% of transfers to an outside clinic or Emergency Department, thereby reducing transportation and other related healthcare costs, and possibly reducing COVID-19 transmission if used during an outbreak.
- Patient Satisfaction with Telehealth. Residents indicated high degree of comfort with Telehealth visits – 94% reported being comfortable or very comfortable with the Telehealth visit.

Additionally, this Pilot Project provided powerful anecdotal insights which can be found in the Lessons Learned section, such as: (1) High potential for reducing administrative costs for nurses and other providers; (2) Increased engagement of family members in health care planning; (3) Early engagement of staff on the benefits of Telehealth.

As a follow up to the experience of this Pilot Project, CETF obtained a grant from the Federal Communications Commission (FCC) in partnership with Los Angeles Jewish Health (LAJH) and 10 other partners representing SNFs, Tribal Clinics and FQHCs, and a Critical-Care Hospital to implement Telehealth. CETF received $862,906 from the FCC COVID-19 Telehealth Program—the only California organization to receive funding—and was highly ranked by the FCC in its second round of funding. The CETF Healthcare Partnership for the FCC COVID-19 Telehealth Program will be informed by the invaluable Lessons Learned from this Telehealth Pilot Project.

<u>Telehealth Pilot Project Objectives</u>

The Pilot Project was designed to implement Telehealth in 4 SNFs and 1 Assisted Living Facility with a focus on the following objectives:

- Provide timely access to critically-needed health services to identify health problems and to be able to receive treatment.
- Assist residents to access healthcare without having to be transported by ambulance unnecessarily and incurring costly transport expenses, avoiding discomfort to residents and decreasing exposure of virus to transport and emergency room personnel.

- Enable providers, including primary care, specialists, emergency department physicians and others to provide care through Telehealth. This allows physicians to cover multiple SNFs, maximizing better distribution of precious health professional resources to cover a wide geographic area without exposure to COVID-19 and avoid delay of treatment.
- Identify seniors more quickly who need access to emergency services, clinics or hospitals for in-person treatment. (Telehealth systems are meant to improve access to health services and not prevent in-person care when needed.)
- Minimize the spread of the virus to staff and reduce community transmission of the virus.

Telehealth Pilot Project Participants

All facilities participating in the Telehealth Pilot Project were based in California.

- Los Angeles Jewish Health[8], Reseda (Los Angeles County)
- Eskaton Village Roseville (Assisted Living and Memory Care), Roseville (Placer County)
- Inland Christian Home, Ontario (San Bernardino County)
- Sierra View Homes, Reedley (Fresno County)
- The Fountains at Adventist Health, Yuba City (Yuba County)

Telehealth Pilot Project Evaluation

CETF engaged the Leonard Davis School of Gerontology at the University of Southern California to evaluate the Telehealth SNF Pilot Project. The following Evaluation Report includes: summary of relevant literature; discussion of the purpose, methods, and program; key findings; and policy and implementation implications.

Partnership with AMD Global Telemedicine, Inc.

CETF had no preference for Telehealth vendors for this Pilot Project. In its research of Telehealth products, it sought a product that was intuitive for the end-user, had basic peripherals included, easily integrated into clinical workflows, vendor provided sufficient training and support, and was cost-effective at an affordable price point. The vendor selected was AMD Global Telemedicine, Inc.

Five AMD Telehealth carts were purchased by CETF. During contract negotiations, CETF requested an enhanced suite of training and technical support, which AMD typically offered at an additional cost. CETF reached out to AMD executive leadership and shared the Pilot Project goals that aligned with AMD goals and values. AMD agreed to partner with CETF and provided the additional services and supports in-kind.

[8] As of July 1, 2022, Los Angeles Jewish Home for the Aging was rebranded as Los Angeles Jewish Health (LAJHealth).

AMD's support for this Pilot Project is commendable. The AMD staff contributed numerous hours training and re-training staff (as facilities experienced frequent turnover), addressed cyber-security and connectivity issues, and problem-solved as needed, which were all well beyond the scope of its contract.

This Telehealth Pilot Project provided many promising insights and lessons learned, which are detailed in the following pages. It is important to note upfront that this Pilot Project suggests that Telehealth can indeed decrease patient transfers to hospitals – thus, reducing costs and spread of the virus – and recognizes that providers and residents were comfortable using Telehealth.

Our hope is that this Pilot Project will inspire policymakers, funders and other stakeholders to see the promise of Telehealth and work to advance Telehealth in California to improve individual patient outcomes and overall population health.

Sincerely,

Sunne Wright McPeak
President and CEO

Barb Yellowlees
Board Member, Chair of Telemedicine Committee

Leticia Alejandrez
Director of Telehealth and Human Services

Executive Summary

The COVID-19 pandemic put residents, staff, and healthcare practitioners in facility-based care, including Skilled Nursing Facilities (SNFs) and Assisting Living Facilities (ALF), at high risk of infection. Telehealth offers the potential of helping facilities prevent infections, improve access to medical care, and reduce medical expenses. Recognizing the urgency of examining Telehealth's efficacy as a response to COVID-19, the California Emerging Technology Fund (CETF) sponsored and funded a Telehealth Pilot Project, in five facilities, four SNFs and one ALF. Led by Kathleen Wilber, Ph.D., the Mary Pickford Foundation Professor of Gerontology and Professor of Health Services Administration at the University of Southern California (USC), a team of evaluators from the USC Leonard Davis School of Gerontology evaluated the implementation of the Telehealth Pilot Project.

Using a diverse set of research methods and evaluation tools, the evaluation team found that: (1) Telehealth prevented nearly 20% of transfers to an outside clinic or Emergency Department, thereby reducing transportation and other related healthcare costs, and possibly reducing COVID-19 transmission. (2) Residents indicated a high degree of comfort with Telehealth visits with 94% reporting that they were comfortable or very comfortable with the Telehealth visit. Nearly half of the residents recommend Telehealth to friends or family members. (3) Telehealth Equipment Operators indicated that Telehealth visits improved the facility's ability to deliver care in 88% of the Telehealth visits. (4) Telehealth showed the capability to address a variety of conditions. Findings underscored that Telehealth shows promise in reducing administrative costs for nurses and other providers, engaging family members, and reducing use of emergency rooms.

Along with the strengths, the evaluation team identified several challenges that hinder the adoption of Telehealth, including initial – but generally put to rest – concerns about the quality of Telehealth compared to in-person visits, the requirement of upfront costs, time constraints, required investment in faster Internet and devices, difficulties in coordinating different platforms in the healthcare system, uncertainty about the payment parity, and the aftermath of COVID-19 chaos in staffing. Six recommendations are offered to overcome these challenges: (1) Recognize sources of resistance to change. (2) Recognize that costs (and the importance of initial investment of time and money) occur before benefits. (3) Understand and address contextual issues. (4) Prepare and pave the way for staff buy-in. (5) Identify a champion, who will provide leadership and "walk the talk." (6) Ensure that sufficient training and support are available.

Background: A Summary of the Literature

SARS-CoV-2, commonly known as COVID-19, devastated the long-term care industry and the residents living in nursing facilities and senior living communities. According to an early estimate, 42% of COVID-19 deaths in the U.S. occurred in skilled nursing facilities (SNFs) (Thompson et al., 2020). In response to the rapid spread and the vulnerability of residents, facilities sought to reduce transmission by closing their doors to visitors and confining residents to their rooms. Under such "lockdown" conditions, Telehealth offered an essential tool to help treat patients in place (Bonvissouto, 2022; Groom et al., 2021; Hollander & Carr, 2020).

What is Telehealth?

Telehealth is a broad term that refers to providing medical care remotely rather than in an in-person visit. In the broadest sense, Telehealth includes connecting by phone or video, sending and receiving information, maintaining files electronically, and remote medical monitoring (U.S. Department of Health and Human Services, 2022). It can also include training providers to use Telehealth technology, the process of setting up necessary equipment, and other activities involved with delivering telemedicine to patients.

The terms ***Telehealth*** and ***Telemedicine*** are often used interchangeably, yet, there are differences. Telemedicine is "the practice of medicine using technology to deliver care at a distance" (Mao et al., 2022). Although the focus of this evaluation primarily involved examining the effects of direct patient care, given the inclusion of training as well as the need to understand facilitators and barriers to using equipment, we use the term **"Telehealth"** throughout this report.

Why Use Telehealth?

Residents living in group settings, such as skilled nursing and assisted living facilities, are at high risk for infection and negative outcomes given that many have multiple chronic conditions and vulnerable immune systems coupled with the nature of infection spread in congregate living. Telehealth offers the promise of protecting healthcare practitioners and their patients as well as enhancing the efficiency of diagnosing diseases and injuries without requiring transport to a physician's office or Emergency Department (Bashshur et al., 2022). Telehealth also offers continuity of care even when residents need to be quarantined or clinicians are required to work remotely (Wosik et al., 2020).

Reducing the need for residents to be seen in settings outside the facility offers the promise of reducing the spread of disease in long-term care communities (Dhaliwal, 2022). To the extent that Telehealth improves access to medical care, reduces time constraints, and increases efficiencies, it also offers the potential to reduce medical expenses.

In March 2020, to support broader use of Telehealth, the Centers for Medicare & Medicaid Services (CMS) authorized waivers to expand Telehealth for Medicare and Medicaid beneficiaries. These waivers allow payment parity for Telehealth in-home visits with in-person visits (Gillespie et al., 2020; Mao et. al, 2022). An evaluation of Telehealth expansion in 2020 found that nearly 85% of SNFs reported that they had adopted Telehealth (Alexander et al., 2021). Medicare Part B visits using Telehealth increased from 840,000 in 2019 to 52,700,000 in 2020 (Suran, 2022). According to the American Telemedicine Association (2021), Telehealth claim lines increased 2980% nationally from September 2019 to September 2020. This increase in use is reflected in burgeoning literature on Telehealth in facility-based care. Early studies suggest that SNFs that adopted Telehealth for their residents' treatments had lower hospitalization rates and mortality rates compared with SNFs that did not (McMichael et al., 2020; Harris et al., 2021).

In primary care, evidence supported the effectiveness of using Telehealth for wellness checks, chronic disease management, medication consultation, regular follow-up appointments, and new patient encounters (Olayiwola et al., 2020). Receiving timely treatments “in place,” especially after hours, is also a strength of Telehealth (Grabowski & O’Malley, 2014) as it can help reduce emergency room visits and transfers. A case-control study found that about 6.7% of emergency room visits were prevented by Telehealth, yielding $2,468 in cost savings per emergency room visit (Langabeer et al., 2017). A qualitative content analysis of a guided interview with healthcare professionals (i.e. physicians, nurses, and medical technical assistants) demonstrated that using Telehealth in nursing homes reduced workload, and increased the efficiency of care provision for residents because the workflow related to care was more streamlined (May et al., 2021). Telehealth visits, which include opportunities for family members to observe and weigh in, with the resident’s approval, may help family members become more engaged and better understand the treatment plan (Lester et al., 2020).

Challenges and Barriers to Implementing Telehealth

Despite the promises, facilities implementing Telehealth confront a number of barriers and challenges (Tuckson et al., 2020; American Telemedicine Association, 2021). These include upfront costs in equipment and training. For instance, constructing the infrastructure to implement Telehealth and cultivating protocols, practices, and policies related to using the technology are prerequisites to realizing the potential benefits of Telehealth.

Successful Telehealth visits are backed by stable Internet and devices capable of visual communication (Sieck et al., 2021). Long-term care facilities may need to spend extra funding to upgrade and maintain their Internet and devices. Although basic knowledge and skills for practice remain the same for clinicians, the platform and channel to deliver medical visits through Telehealth may be different, such that additional competence in using Telehealth is required (Purc-Stephenson & Thrasher, 2010; Honey & Wright, 2018), which could lead to learning costs for health providers. Some patients, clinicians, and nursing home staff may prefer in-person visits over Telehealth for a variety of reasons (e.g., concerns about quality of care, reimbursement issues, training requirements) (Groom et al., 2021), which may impede the acceptance of Telehealth.

Another barrier to adoption is that there are many different Telehealth platforms, and they are not standardized. Clinicians who use Telehealth in one facility may not have the time or interest to be trained on a different platform.

Finally, most facilities lack dedicated staff time to assist with Telehealth implementation and use, which adds to the already strained staffing shortage that 24-hour care facilities experienced during the pandemic.

Purpose of the Evaluation

To inform those seeking to adopt Telehealth in facilities and policymakers considering funding this approach, it is important to build a better understanding of the potential benefits and costs of implementing Telehealth in facility-based care, including needed investments and implementation strategies.

The purpose of this evaluation was twofold:

1. Examine the impact of Telehealth on residents, staff and providers in five facilities;
2. Identify possible barriers and challenges in implementing Telehealth in these facilities.

Therefore, we evaluated both processes and outcomes of a Telehealth Pilot Project conducted in five long-term care facilities in California. The Telehealth Pilot Project was intended to help facilities reduce the spread of COVID-19 and other infectious diseases and to improve overall medical care for residents. Specifically, the evaluation sought to:

1. Provide a better understanding of residents' concerns, barriers, and acceptance of Telehealth and strategies to facilitate older adults' comfort with Telehealth;
2. Identify promising approaches in implementing Telehealth and inform the industry of useful strategies;
3. Identify how policies can support Telehealth and inform policymakers and service providers by offering feasible recommendations on how to better deliver, promote, and oversee Telehealth in SNFs.

Methods

Setting

The evaluation was conducted in five long-term care facilities: 4 skilled nursing facilities (SNFs) and 1 assisted living facility (ALF).

Goals

The goals of the Pilot evaluation were to:

1. Provide input and expertise to CETF on the design, measures, and data collection approaches for the Pilot study.
2. Address the following questions:
    a. To what extent and in what ways does Telehealth make a difference to residents and to providers in facility-based care?
    b. To what extent does Telehealth appear to impact the cost of care?
    c. What were the essential steps/processes used to implement the Telehealth program in each facility?
    d. What are the key components needed to replicate the practices?
3. Make recommendations on replication practices and Telehealth policy in facility-based care.

Deliverables

1. Provide a final report describing the lessons learned, outcomes, and recommendations.
2. Assist with a 2-3-page policy brief that describes the key findings.

Evaluation Procedures

1. Reviewed and provided input on evaluation measures, design, and processes including: Met regularly with CETF to review and advise on all instruments – Telehealth visit documentation form (Appendix 1); bi-weekly check-in information (Appendix 2); and data collection processes and systems.
2. Collected several types of data, described below, for analysis.
3. Summarized data from Pilot sites – pre/during/post COVID-19.
4. Provided information on what publicly available data sets might be available for comparison with the findings from the 5 facilities.
5. Submitted a draft evaluation report and made recommendations for a framework for a Telehealth Replication Model in collaboration with CETF and partners from the Pilot sites.

Data Sources

Literature

To obtain a synopsis of the potential benefits and costs of implementing Telehealth in long-term care facilities, we reviewed relevant papers published from 2010 to 2022 in PubMed, as discussed in the introduction.

Telehealth Visit Documentation Form

During the Pilot Project, each Telehealth visit that occurred in the five Pilot sites was recorded using a Telehealth Documentation Form developed by the team for use in evaluation. The Form (see Appendix 1) included demographic information of residents who participated in Telehealth; Telehealth equipment used; reason for visit; type of clinician; diagnosis; whether or not preventing transfer; patients' and clinicians' comfort using Telehealth; and whether Telehealth equipment operators perceived the usefulness of each Telehealth visit in improving facilities' performance.

Monthly Learning Session

During the evaluation period, we had monthly one-hour group learning sessions with representatives, primarily Executive Directors or Medical Directors of the Pilot sites to discuss updates. The goals of the monthly learning sessions were to provide mutual support for colleagues in a field that was being ravaged by the pandemic, encourage implementation momentum, and address challenges and problem-solve issues. To document lessons learned about barriers and implementing Telehealth that emerged from the monthly sessions, we took notes and analyzed the themes that emerged.

CMS Quality Indicators (QIs)

SNFs submit QIs quarterly to the Centers for Medicare and Medicaid (CMS), as part of the Minimum Data Set (MDS). These QIs were provided to the evaluation team to assess the program's impact on quality. We tracked nine QIs including (1) number of emergency room visits, (2) number of hospitalizations, (3) number of readmissions within 30 days, (4) number of residents receiving antipsychotic medication, (5) number of residents who fell, (6) number of residents having acute UTI, (7) number of residents who were diagnosed with depression, (8) number of residents receiving anti-anxiety medication, (9) number of residents receiving hypnotic medication. These indicators were identified in consultation with representatives from each of the Pilot sites. However, concerns about these measures were that not all the sites had the capacity to track these indicators; there was a three-month lag time — QIs are reported quarterly — and only a small number of residents used Telehealth whereas QIs reflect all the residents in a facility.

COVID-19 Tracking

Publicly available data from CMS were used to track COVID-19 outbreaks in each facility prior to and during the evaluation.

Description of the Pilot Program Intervention

The Pilot sites were provided with a Tablet Cart. Designed to serve a variety of clinical options, the cart included:

- PanTilt Zoom Camera
- Digital stethoscope
- Wireless ECG (12 lead)
- Pulse oximeter

Along with the physical Tablet Cart, each partner received technical training and support to ensure connectivity and troubleshoot technical problems, virtual training on the Telehealth carts, and technical support from Project Team. Each site reviewed its broadband Internet capacity and upgraded as needed, if it had the resources to do so.

In addition, CETF provided bi-weekly check-ins and assistance with representatives of each facility. Representatives included Executive Directors and/or Medical Directors, staff involved with Telehealth or data management (e.g., MDS coordinators), and other staff involved with implementing the program. Key questions asked during the check-ins included the barriers each facility encountered, strategies to overcome barriers, success, lessons learned, support needed to address challenges, and potential considerations of the benefits and costs of widespread use of Telehealth.

Findings

Characteristics of the Sites

Table 1 shows the characteristics of the 5 Pilot sites. Number of beds ranged from 59 to 145; three sites operated within Continuing Care Retirement Communities (CCRC); all were non-profit; two were part of larger organizations that included other sites that did not participate in the study; four were in urban areas; one was located in a rural area. Site 4, The Fountains, joined in the last quarter after one of the initial sites, Dignity Health (now CommonSpirit Health), left the study.

Table 1. Characteristics of the Pilot Sites

	Bed Size	Part of a CCRC	For-Profit / Non-profit	Organization has more than one site	Urban / Rural
SNF 1 (Jewish Health)	105	No	Non-profit	Yes	Urban
SNF 2 (Inland Christian)	59	Yes	Non-profit	No	Urban
SNF 3 (Sierra View)	59	Yes	Non-profit	No	Rural
SNF 4 (The Fountains)	145	No	Non-profit	No	Urban
ALF (Eskaton)	96	Yes	Non-profit	Yes	Urban

COVID-19 Tracking

The Pilot was initiated, in part, to reduce the spread of COVID-19. Therefore, we tracked outbreaks of the virus in each of the four SNFs and compared these findings to trends in California (See Appendix 3). COVID-19 was dramatically reduced in all sites and in the state overall with uptake of vaccination (February 2021). Although it is not possible, because of the high rate of vaccination and other factors, to link the use of Telehealth with reduced spread, the extremely low rate of COVID-19 in the LAJH, where most of the Telehealth visits occurred, is notable.

Quality Indicators

To measure change in quality, data were requested from the sites to track nine MDS quality indicators monthly. Indicators included number of: (1) emergency room visits, (2) hospitalizations, (3) readmissions within 30 days, (4) residents receiving antipsychotic medication, (5) residents who fell, (6) residents having acute urinary tract infections, (7) residents who were diagnosed with depression, (8) residents receiving anti-anxiety medication, (9) residents receiving hypnotic medication. These indicators were determined in consultation with CETF and representatives from each of the Pilot sites.

Three of the five Pilot sites did not have the capacity to track the indicators. (Eskaton as an Assisted Living Facility is not required to track these SNF indicators.) The indicators that we did receive remained stable from three months before to the completion of the Pilot Project. These indicators did not appear to be reasonable measures of the impact of Telehealth given the start-up issues discussed below, the small sample that used Telehealth, and the lag in indicators in terms of national reporting.

However, building on these quality indicators, three members of the Pilot Project developed a protocol for using Telehealth for Continuous Quality Improvement (see Appendix 4). The data that we received are provided in Appendix 5.

Documentation Tool

The Documentation Tool was completed by staff to collect information on Telehealth visits (n=37 residents). The following communities participated: Grancell Village of the Los Angeles Jewish Health (n=25), Inland Christian Home (n=5), Eskaton Village Roseville (assisted living) (n=7).

Characteristics of the Sample

Table 2 shows characteristics of residents with Telehealth visits during the Pilot Project. The average age of the residents who participated was 88.5 years. Most (78%) were female. Almost all were White. Telehealth carts were used in 70.3% of the visits; in 29.7 of the visits other equipment (e.g., smartphone, iPad) was used. Three-quarters (73%) of visits were regular or follow-up visits; 27% were due to a change of condition, and 7.1% were urgent visits. Among those using the cart, 86% of the clinicians were medical doctors and 14% were registered nursing practitioners. The most common conditions were: multiple conditions, orthopedic, dementia, kidney disease, and neurological disease. Those characteristics suggest that **Telehealth in the Pilot Project had the capability to fulfill a variety of needs and provide care to residents with various conditions.**

Table 2. Characteristics of the Patients and Visits

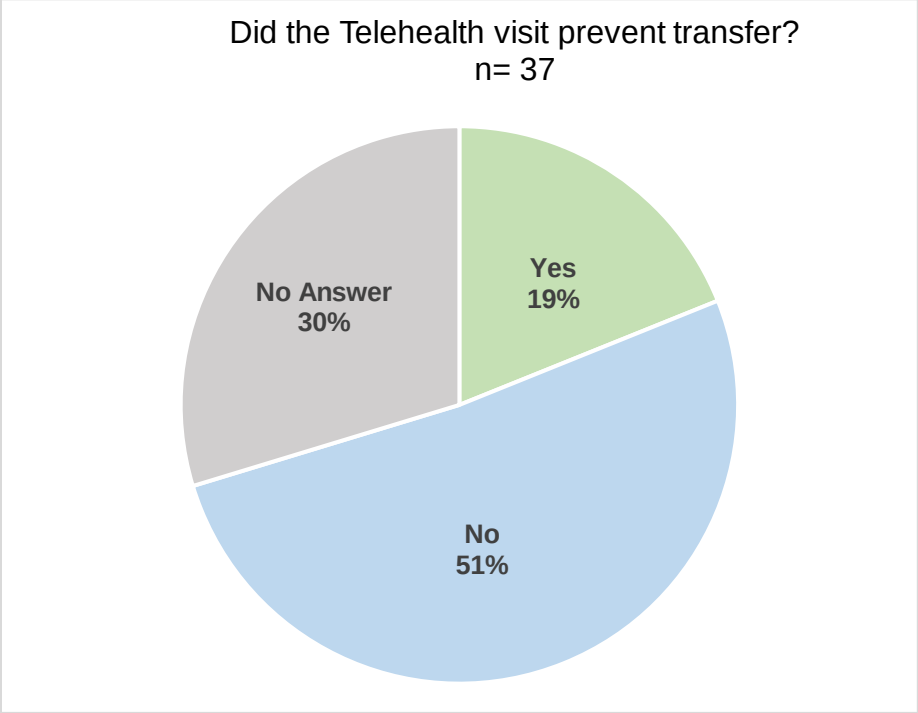
	Mean ± SD	Percentage (N=37)
Age	88.5 ± 8.1	
Gender		
Female		78%
Male		22%
Race		
White		94.6%
non-White		5.4%
Equipment Used		
Telehealth cart		70.3%
Other (smartphone, iPad, computer)		29.7%
Reason for Visit		
Regular/Follow-up		73%
Change of condition		27%
Urgent Visit		
Yes		7.1%
No		92.9%
Type of Clinician		
Medical Doctor		86%
Registered Nursing Practitioner		14%
Diagnosis		
Multiple conditions		21.6%
Orthopedic condition		18.9%
Dementia		10.8%
Kidney disease		8.1%
Neurological disease		8.1%
Endocrine disease		5.4%
Infectious disease		5.4%
Urinary disease		5.4%
Weight loss		5.4%
Others (leg swelling, psychiatric, vision, wound)		10.9%

Outcomes

Telehealth was thought to prevent nearly one in five transfers to receive medical care outside the facility. Residents and providers were overwhelmingly comfortable with Telehealth. Those using the Telehealth equipment believed that using Telehealth improved service delivery.

Telehealth prevented nearly 20% of transfers to an outside clinic or Emergency Department, thereby reducing transportation and other related healthcare costs, and possibly reducing COVID-19 transmission if used during an outbreak.

Figure 1. Preventing Transfer



Residents indicated a high degree of comfort with Telehealth visits – 94% reported being comfortable or very comfortable with their Telehealth visit. Nearly half of the residents would like to recommend Telehealth to friends or family members.

Figure 2. Resident/Patient Comfort

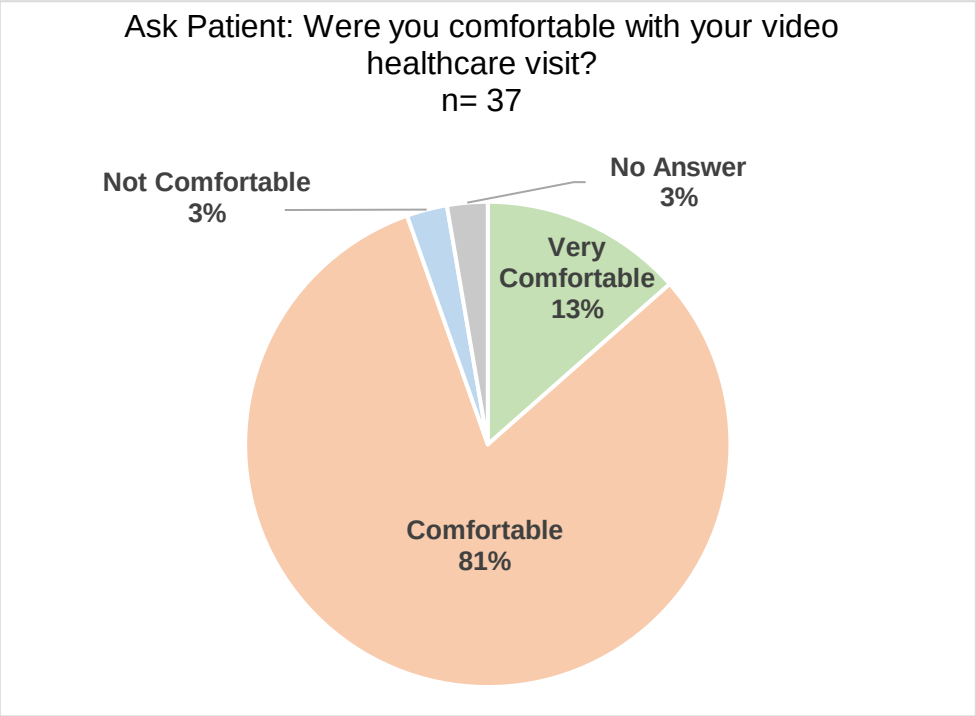
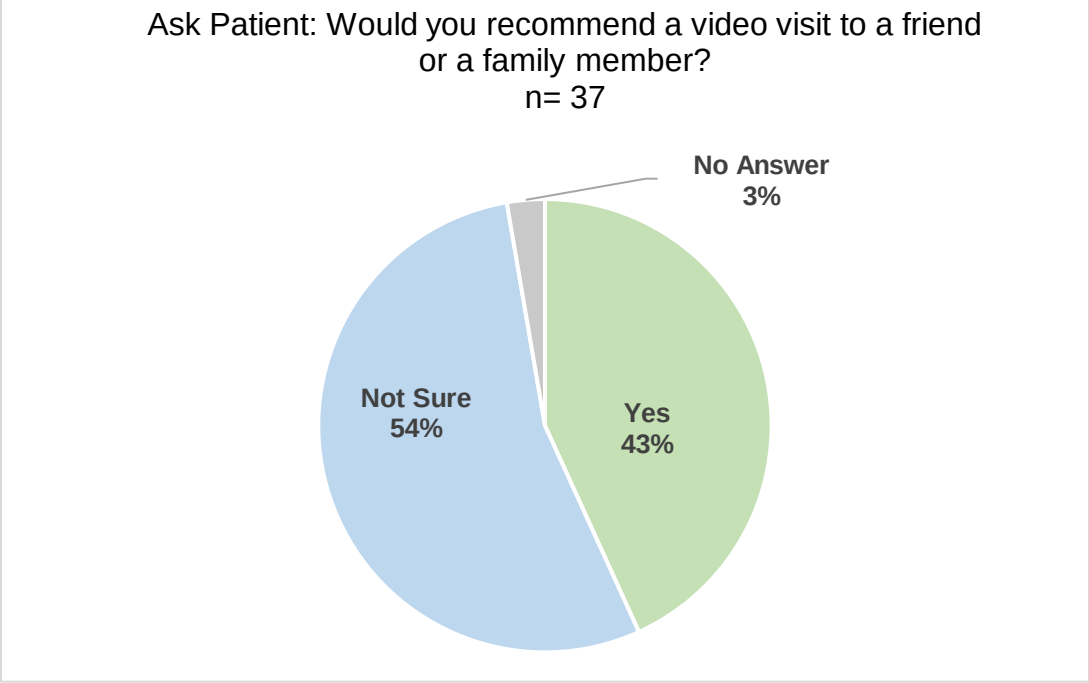
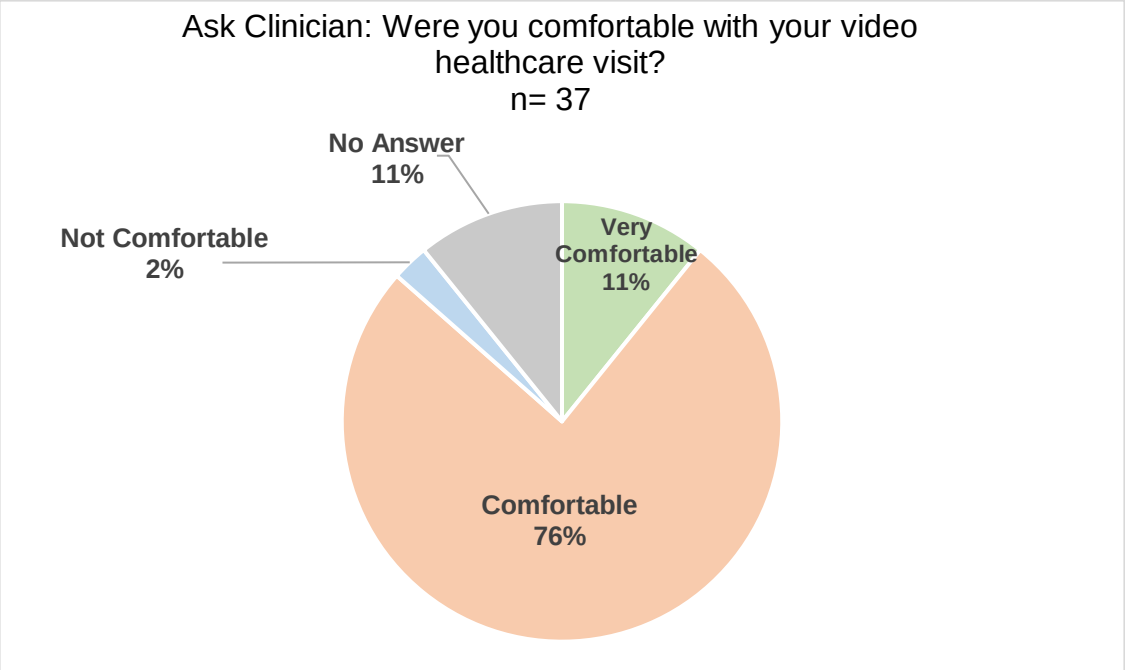


Figure 3. Resident/Patient Recommendation



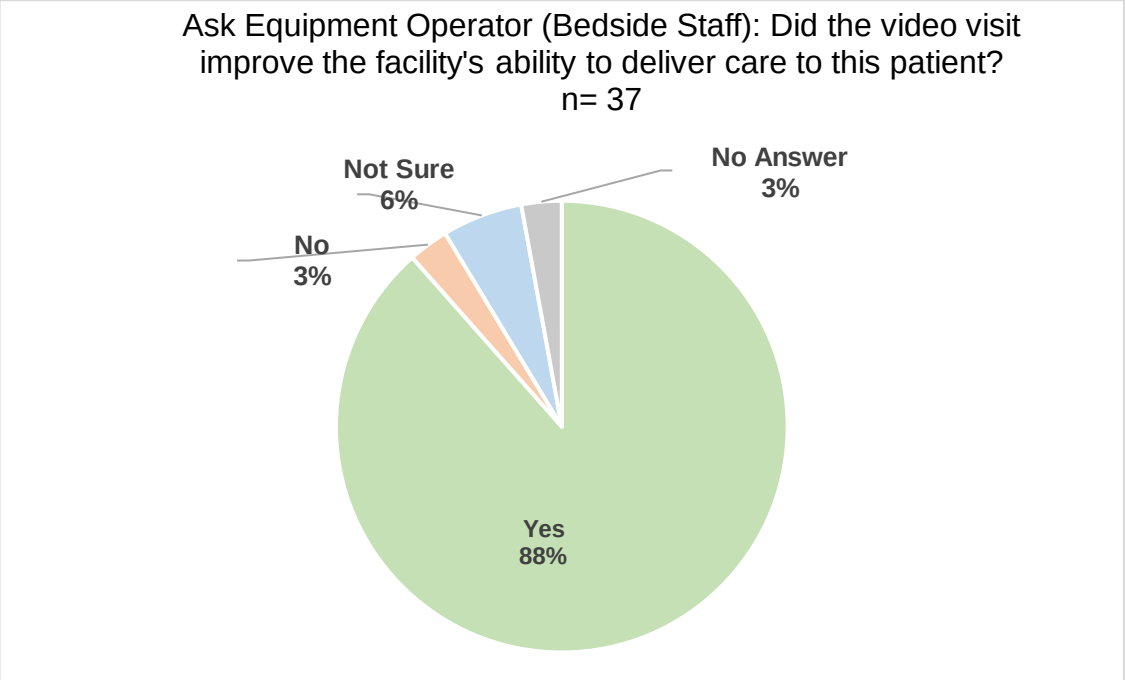
Clinicians were generally comfortable conducting a Telehealth visit – 87% reported being comfortable or very comfortable with the Telehealth visit.

Figure 4. Clinician Comfort



Telehealth Equipment Operators perceived that Telehealth improved the quality of care delivery. That Telehealth visits improved the facility's ability to deliver care was observed in 88% of the Telehealth visits.

Figure 5. Operator Perception of Improving Care Delivery



Lessons Learned Implementing the Program

In addition to widespread acceptance of Telehealth by residents and indications that transfers were reduced, several other benefits emerged that support using Telehealth. These were identified during regular virtual monthly group meetings with the sites. Key lessons are described below. They are supported by illustrations (in *italics*) from notes from the bi-weekly implementation check-ins and during the monthly learning sessions. In most cases, these are not direct quotes but summaries of participants' comments. We believe that these lessons offer potential guidance for facilities seeking to replicate the Telehealth Pilot Project.

Telehealth Benefits

Potentially Reducing Administrative Costs for Nurses and Other Providers

In the Pilot Project, nearly 20% of the Telehealth visits were thought to prevent transfer, potentially reducing costs, trauma for the resident, and administrative charting time. In addition to the health care costs involved when a resident is transported to and seen in the Emergency Department, the administrative burden of required paperwork at the facility is high. The Chief Medical Officer at the LAJH developed a list of advantages (See Appendix 6). The list was based on discussions with nursing staff who reported that fewer transfers reduced their workload because they did not have to complete the paperwork required for a resident to transfer out of and return to the facility.

> *"Telehealth can make nurse-centered improvements because of decreased calls, tests, and forms. Nurses in facilities become true health providers rather than performing like clerks."*

> *"Telehealth is a cost-savings. Arranging transportation is costly and getting residents to hospitals is time-consuming."*

> *"(Telehealth) saves money for CMS by preventing transfers as well as ED and hospital costs."*

Engaging Family Members

Some sites made Telehealth visits open to family members with permission from the resident. First-hand observation of and participation in Telehealth visits was thought to help family members become more aware of their loved ones' medical issues and more involved and satisfied with the care that the resident was receiving. This was an important benefit for family members who did not live in the area as well as during the lockdowns when in-person visits were restricted. In addition, family members, who were involved in Telehealth visits, were often able to provide key information offering additional help to the clinician's assessment and decision-making.

> *"It makes it convenient for family members to see how their loved ones are taken care of without having to be at the facility."*

Reducing Overuse of Emergency Rooms and Related Reimbursement

In the Pilot project, we observed that nearly 20% of the Telehealth visits prevented transfers, which is consistent with estimations from previous studies discussed above. Prevented transfers could result in savings for Medicare and Medicaid.

> *"It takes 30 minutes on a Telehealth cart versus 1.5 hours of follow up calls and preparing people to leave the facility to see doctors."*

Telehealth permits collaboration between treatment providers such as among attending physicians, nurses, physical therapists, and other care professionals. For nurses, it reduced redundancy or attempts to fax/call a physician for treatment orders because the physician is able to provide verbal orders immediately after the Telehealth visit. It provided opportunities to elevate the competency of the clinical team. For example, a physician can provide in-the-moment teaching to nursing staff when they listen to the heart and lungs together.

Challenges Implementing Telehealth

Concerns About Lower Quality

Although Telehealth is not a new technology, it was perceived as a non-traditional form of healthcare by some residents, family members, and healthcare providers. We observed that a small number of residents, clinicians, and family members rejected Telehealth out of concern that the quality of care was lower. Some indicated that when in-person visits were possible, it was not acceptable to deliver services virtually. This stereotype was addressed to some extent once providers were engaged.

Using The Cart Requires A Number of Upfront Costs, Including Increased Cybersecurity And Changes in Workflow

Several costs were incurred before facilities could reap the benefits of Telehealth. There were significant broadband planning and implementation considerations. For example, before installing Telehealth equipment, facilities needed to work with their IT staff to ensure cybersecurity and to assess whether or not there was adequate connectivity throughout the building for technical accommodations (i.e., cybersecurity) or authorizations and/or security clearances needed to be made. For several sites, this was a laborious process that required approval and appropriate configuration to ensure that capacity and safeguards were adequate. An additional step involved, a heat-map analysis to determine Wi-Fi strength and range as well as to assess where the barriers to adequate connectivity were.

The biggest challenge identified was shifting how work was done in terms of day-to-day operations. Sites experienced that initially, Telehealth takes more rather than less time, until it is fully integrated into standard practice. Given other issues, it is understandable that some clinicians and operators were unwilling to take the time to learn and become fully competent in operating the Telehealth cart. Some were concerned that the equipment was difficult to use and most had little time to devote to learning a new skill.

One of the most significant difficulties was changing patterns of workflow and standard operating procedures. Moreover, breaking previous patterns for how work was done was hard to initiate during the COVID-19 healthcare crisis.

Often nurses, technical support staff, and clinicians made additional efforts at the beginning to learn how to use Telehealth equipment, mainly the cart and its online platform. Adopting new technology involved changes in the routine they were accustomed to. Although CETF provided training and technical support for how to use the carts in each of the facilities, at some facilities, turnover coupled with shortages of key staff increased demands on staff and further limited time to learn to use the cart. Some sites shared that putting too much effort in training could add to workloads and disrupt their scheduled plans.

> *"Staff in our facility have been accustomed to how things were done before. Using Telehealth took them more time before they became familiar with it."*

> *"Clinicals have been using Zoom for their visits. We have to convince them to go through the cart."*

Time Constraints

One common misconception about Telehealth is that it takes less time. While transportation time and the need to transfer residents to the Emergency Department are reduced, these costs and time savings are not realized by the individual providing Telehealth services. In fact, the Telehealth per visit time may be longer than an in-person visit (especially in SNFs), since family members and nurses are often able to participate in the clinical visit along with the treating providers. A related concern, in terms of how things were done, was that physicians who arrive for regular in-person visits are often scheduled to see multiple residents at once. Thus, the cart does not save the travel time it would if they were coming to see only one or two people.

Concerns About Investing in Faster Internet and Devices

CETF purchased the carts for each of the Pilot sites. However, many of the sites also needed to upgrade their Internet bandwidth and/or install boosters or access points to be able to use the carts in various parts of the facility. For facilities seeking to launch a similar approach to Telehealth, purchasing the equipment, including carts and, in some facilities, expanding/upgrading their capacity to reliability to connect to the Internet would be additional budget items.

> *"We had Wi-Fi problems during the visit. Getting the cameras to work needs high-speed Internet."*

Coordinating Different Platforms in the Healthcare System

In some sites, outside clinicians used different platforms for Telehealth visits. This required Telehealth operators from the Pilot sites to serve as a coordinator to set up the platform. Additionally, some providers said that they preferred to use their smartphones for Telehealth. This approach circumvented the facility's Telehealth platform and meant that they were not taking advantage of the multiple diagnostic tools offered by the cart.

Uncertainty About Payment Parity

Although the Pilot study did not measure cost per se, we observed that representatives in the Pilot sites were skeptical about how long waivers, developed to promote Telehealth by ensuring payment parity with in-person visits, would last. Some may be reluctant to invest to build full Telehealth capacity given the potential uncertainties in payment policy. These concerns were validated when the waivers to allow Telehealth for required visits were discontinued.

> *"We are not sure what will happen after the COVID-19 waiver ends."*

In addition, uncertainty stems from states, including California, that have relied on Public Health Emergency waivers from the Federal government. These waivers will expire upon the Federal government proclaiming the end of the public health emergency, which is expected to be in early January 2023. California is expected to end its PHE shortly thereafter.

The Aftermath of COVID-19 Chaos in Staffing

A major issue was staffing challenges in the aftermath of the acute phase of the COVID-19 Pandemic. The dangers and burnout from staff working in health care, coupled with what has been called "the great resignation" or high turnover, meant that some facilities experienced ongoing staff shortages requiring them to consistently hire and train new staff. The results of this for nursing facilities that were struggling before the COVID-19 pandemic meant that some of the sites were extremely understaffed. Management shared that they were struggling to do what was required for the residents but had no capacity to do anything else.

A related issue was that the costs of implementing Telehealth are mostly on the front end around training and making the cart part of standard operating procedures. As one administrator put it:

> "*The biggest challenge was getting staff involved – getting them to buy in. There is a lot of work to be done before starting Telehealth. We are experiencing a lot of turnovers. Staff said they could go faster using old ways, so why do they have to adopt new technology? Telehealth is treated as an emergency tool rather than a routine tool. If it is not used every day, staff would lose the capacity to use it; they need to go through the training and also maintain the ability/familiarity of using Telehealth since there is a staff shortage. They don't want to spend extra time to learn, since they are experiencing staff turnover and it is hard to maintain the momentum of using Telehealth."*

Other statements supported this statement:

> *"The impact of COVID-19 is so profound. Our staff was so distracted and we had an unprecedented turnover rate. We are experiencing a severe staff shortage. It is not feasible for them to learn to use (the Cart)."*

> *"The staff in our facility found learning to use the Telehealth cart is difficult."*

Several solutions were offered to address these issues. For example, one site had a specialist who served as the go-to person for support. Another provider suggested that implementation might work better if the program took some pages out of a franchise model. Using this approach, sites would be provided with a hotline to connect to troubleshooting experts; the model suggested that facilities could join together to fund a troubleshooter when problems arose.

Recommendations: Don't Put the Cart Before the Course

Successfully implementing a Telehealth program requires recognizing and addressing potential barriers and challenges.

The Telehealth Pilot Project successfully identified barriers and challenges that were encountered by the Pilot sites and are likely to be encountered by most facilities that develop a Telehealth Program. We divided the identified barriers and challenges into broad categories and developed recommendations on how to address each of these legitimate issues.

Recognize Sources of Resistance to Change

The Problem: Leadership may approach Telehealth with the idea that "if we build it, they will come." In our experience, this is rarely the case. Resistance to change occurs, in part, because effective staff have internalized standard operating procedures; they are typically efficient because they know how to do their job. Changing those patterns is challenging.

Possible Solution: Rather than approach this as a "top-down" initiative as leadership's solution to what they have identified as their staff's challenges, we suggest first meeting with staff and having them identify their workload issues. Then educate them on – although Telehealth will add some challenges – it will also resolve several of their identified concerns.

Recognize that Costs (and Need to Invest Time and Money) Occur Before Benefits

The Problem: Staff and Management may not be willing to invest time and money upfront to save time and money later. This is even truer in a crisis when everyone is doing their best to stay afloat.

Possible Solution: Create easier funding paths and grant processes for facilities to apply and receive grant funds from both government and private sources that are less labor intensive for staff that are already over-burdened by the public health emergency.

Understand and Address Contextual Issues

The Problem: Even though SNFs are standardized through rigorous regulations, every facility is different in terms of its culture, resident mix, leadership, environment, physical plant, and available resources. In addition to being aware of implementation issues, leadership will need to be aware of how these issues interact with the unique aspects and needs of their facility.

Possible Solution: Develop a standardized survey that highlights contextual issues (i.e., culture, resident mix, leadership, environment, physical plant, available resources, and other issues) that facilities must complete and identify how they intend to address these issues as a requirement for the grant application.

Prepare and Pave the Way for Staff Buy-in

The Problem: Staff, especially those who are stressed by challenges beyond their control, will need preparation and support. Leaders will need to identify what it will take to get genuine staff buy-in and what barriers need to be overcome. In addition to an initial plan, management will need to work closely with staff as they begin to implement the program (See Appendix 7 for a list of conditions most conducive to using Telehealth). They should consider what incentive structure is needed and how to address problems by supporting staff who identify problems and participate in resolving them.

Possible Solution: Use tools such as the FAQ (see Appendix 8 and Appendix 9) prior to or at the beginning of the first session. Subsequent sessions should start with asking staff what issues they had and provide positive acknowledgment of staff members who bring forward previously unidentified issues.

Walk the Talk: Identify a Champion

The Problem: Lack of an identified champion slows down implementation across the organization and when barriers arise without an effective champion, they may stop the program entirely.

Possible Solution: Prior to staff buy-in, leadership will need to be firmly behind the program. We recommend that this includes identifying a champion who will work to support all aspects of preparation, training, and ongoing support. This requires understanding the potential benefits, as well as knowing what could go wrong and how to address it. Among the Pilot sites, Los Angeles Jewish Health (LAJH) had the most success implementing Telehealth. We believe this was due, in large part, to the knowledge and hands-on approach of their Chief Medical Officer who served as an effective champion. Perhaps even more importantly, LAJH hired a Telehealth Program Manager to support successful implementation – funds for the position were provided by a private grant.

Ensure that Sufficient Training and Support are Available

The Problem: Most people need some handholding in addition to standardized training protocols. One idea is to create a short readiness assessment to get a sense of how willing those who will carry out the program are to participate. Of course, to the extent that this is time-consuming, it could be counterproductive.

Possible Solution: Facility leaders should consider what kind of incentive system would get people to the table and enhance their willingness to do what is necessary to learn and use the program. The key takeaway here is to create a course that identifies where the staff and facility are at prior to implementation. Then in that course show how the program supports them and connects to their values. Then, train the staff in the use of the equipment. Hence, our title: Don't put the cart before the course (of essential training, support and ongoing efforts to effectively roll out the program).

Conclusion

Overall, this Telehealth Pilot Project illuminated many unanticipated outcomes related to implementation that must be taken into consideration by policymakers, private funders and practitioners. It is clear that providing Telehealth equipment alone is not sufficient. Implementation must include project management and additional staff to support pre-implementation, rollout and adoption. In addition, a technical assessment should be made in advance to determine broadband capacity, network compatibility and if Wi-Fi connectivity enhancements are needed, as well as cybersecurity considerations. High-level leadership must be identified and consistent to support staff buy-in and address resistance to new technology and concerns regarding change management and workflows. Initially, it may be labor-intensive for staff to learn the new technology, but quality training, technical support, daily practice and mutual support are essential. This Telehealth Pilot Project demonstrated that Emergency Department visits were reduced by 20% and over 90% of patients were satisfied with their Telehealth experience/visit. This is promising.

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Appendices

Appendix 1. Telehealth Visit Documentation Tool

Telehealth Visit Documentation Tool – Rev. 3/2/22

1. Date/Time: _____ Patient ID: _____
   (For privacy, please only use: First/Last Initials and Medical Record #)
2. Equipment Used: ☐ AMD ☐ Amwell ☐ Smart Phone ☐ iPad ☐ Other:_____
3. Equipment Operator: *(Name/License or Title)* _____
4. Telehealth Clinician Provider Name: _____

   Degree/License: _____ **Specialty**: _____
5. Other Healthcare Professional(s) Present *(Name/License or Title)*: _____

   _____
6. Reason for Visit: Regular/Routine Check-up: _____ Change of Condition:_____ COVID-19: _____
   Other – (Indicate Primary Concern): _____
7. Patient: *(circle)* Female OR Male Age:____ *(Or prefer not to answer)* _____
8. Ethnicity: ☐ African American/Black ☐ Latino/Hispanic ☐ Other: _____
   ☐ Asian/Pacific Islander ☐ White
9. Preliminary Diagnosis *(Please list top 3 conditions)*: _____
   _____
   _____
10. Orders Given: ☐ New Rx ☐ Labs: *(circle)* Blood X-Ray EKG Ultrasound
    ☐ Change RX ☐ Other: _____
11. Did Telehealth Visit Prevent Hospital Transfer? *(Please circle one of the following:)*
    _Yes. This Telehealth visit prevented the need to send patient to ED.
    _No. Because the visit was routine. *Other:* _____
    _No. Patient needed to go to ED even after the Telehealth visit.
12. PATIENT: Were you comfortable with your video healthcare visit?
    ☐ Comfortable ☐ Very Comfortable ☐ NOT Comfortable (If not, why not?)_____
13. PATIENT: Would you recommend a video visit to a friend or family member?
    ☐ Yes ☐ No (If no, why not?)_____ ☐ Not sure
14. CLINICIAN: Were you comfortable providing care through video visit?
    ☐ Comfortable ☐ Very Comfortable ☐ NOT Comfortable (If not, why not?) _____
15. EQUIPMENT OPERATOR (Bedside Staff): Did the video visit improve the facility's ability to deliver care to this patient?
    ☐ Yes ☐ No ☐ Not Sure

Appendix 2. Bi-Weekly Telehealth Utilization Check-in

Bi-Weekly Telehealth Utilization Check-in

Date: _____

Staff Name: _____

Facility: _____

Completed by: Leticia Alejandrez, CETF Director of Telehealth and Human Services or Marcus Wolf

1. Do you have a fully operating/functional AMD (or Amwell) Telehealth cart? Yes/No

    a. If no, why not? What are you struggling with?
    b. Is there any support that can be provided (and from whom) to resolve issue?
    c. What is the timeline for resolving issue?

2. Have you used the AMD (or Amwell) Telehealth Cart? Yes/No

    a. If no, why not? What are you struggling with?
    b. What support is needed to help resolve this issue?
    c. What is the timeline for resolving issue?

3. How many times has Telehealth cart been used this week? _____

    a. Was the experience successful? If not, why not: _____
    b. What can be done differently or better to be improved? _____
    c. How can I be supportive? _____

4. What is limiting a more widespread use of Telehealth? _____

    a. Have more staff been trained? If yes, who (e.g., MDs, RN, CNA, etc.) _____
    b. Are you having connectivity or broadband issues? _____
    c. What other technical issues are you having (i.e., EMR, old infrastructure, etc.)? _____

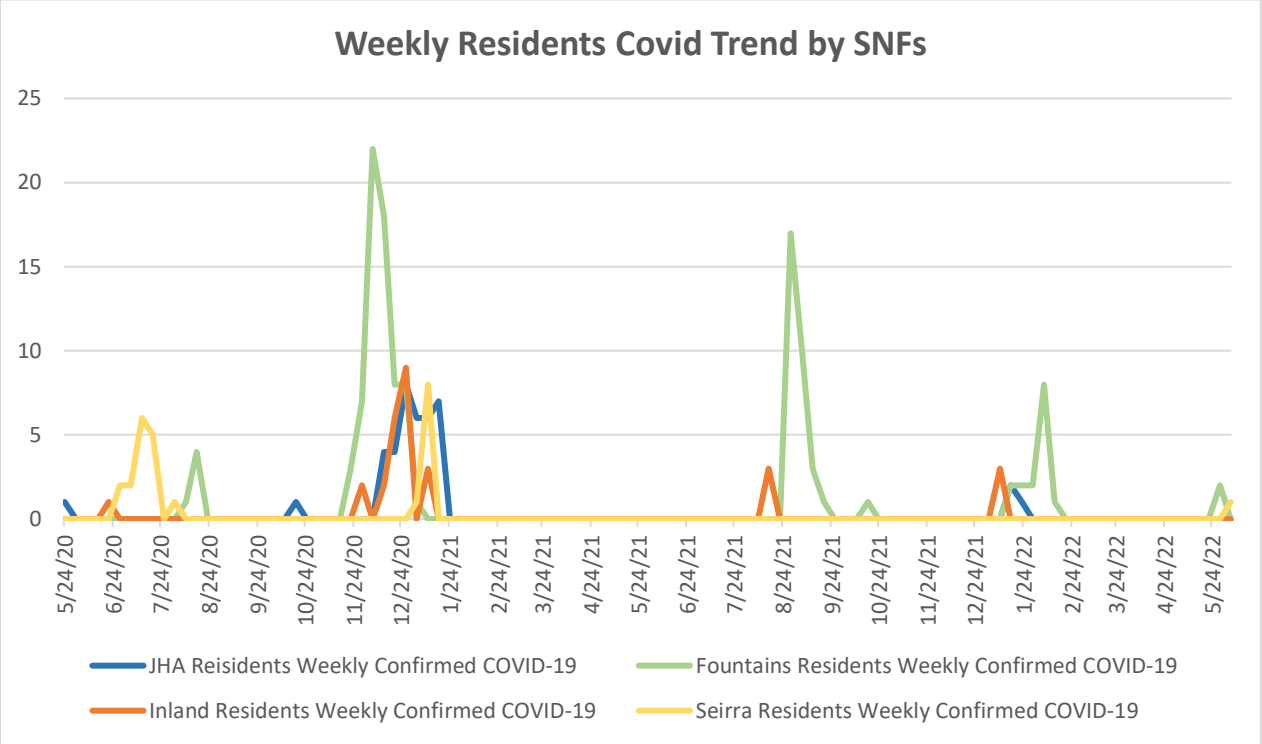
5. Are you aware of Telehealth use in your facility to prevent the transmission of infectious disease – i.e., COVID-19, influenza, CDEF, MRSA, etc.? Yes/No

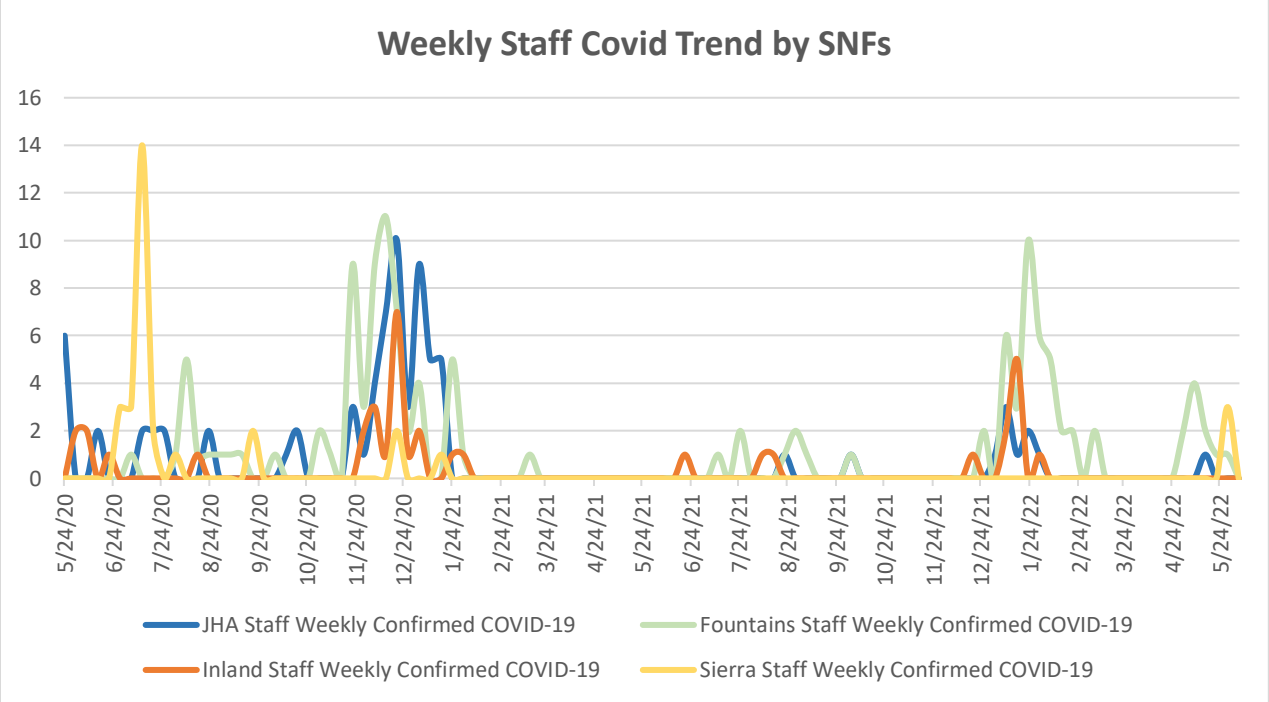
    What type of infectious disease has been addressed – i.e., COVID-19, influenza, CDEF, MRSA, etc.? _____

6. Other/Comments:

Appendix 3. Covid Trends in the Pilot Sites

Source: CMS Nursing Home Covid Data





Reference: California Covid Trend

Appendix 4. Protocol for Falls, UTI Antibiotics, Psychiatric Medications, Depression

PROTOCOL FOR: FALLS, UTI ANTIBIOTICS, PSYCHIATRIC MEDICATIONS, DEPRESSION[1]

Background

The CETF collaborative aims to improve facility quality metrics by using Telehealth as a tool for Continuous Quality Improvement (CQI). *(Note: Reduction of ED visits and hospitalization are addressed in a separate Aim where individual visits are tracked and are not included in this protocol.)* This specific protocol targets the CMS quality metrics below (short-term and long-term residents are combined):

- Percentage of SNF residents who experience one or more falls with major injury during their SNF stay.
- Percentage of long-stay residents experiencing one or more falls with major injury.
- Percentage of long-stay residents with a urinary tract infection.
- Percentage of long-stay residents who received an anti-anxiety or hypnotic medication.
- Percentage of residents who received anti-psychotic medication for the first time.
- Percentage of long-stay residents who have symptoms of depression.

Falls

For unwitnessed falls, nursing staff contacts clinician (MD/DO/NP/PA) to schedule post-fall Telehealth evaluation within 72 hours:

- Prior to evaluation, nursing staff obtains orthostatic BP/HR prior to visit.
- Notifies MDS coordinator that Telehealth visits was made.

Interventions may be medication changes, pharmacy medication evaluation, PT/OT evaluation, activities/environmental changes.

For witnessed falls, nursing staff may defer clinician visit when indicated.

Antibiotics for UTI

When urinary studies (UA & C/S) are ordered OR when antibiotics are prescribed for UTI, nursing staff reaches out to clinician (MD/DO/NP/PA) to facilitate video visit (aim for <24 hours)

Psychiatric Medications

Prior to start of anti-psychotics and anti-anxiety/hypnotic medications, an in-person or Telehealth visit is made prior to order entry or within 24 hours for orders that happen overnight/weekends to verify need for the medication.

Depression

For residents with PHQ9>7, re-administer PHQ9 in 5-7 days. For those who verbalize depressive symptoms lasting more than 2 weeks (or more than 7 days after admission), schedule in-person or Telehealth visit within 72 hours with clinician's attending team (MD/DO/NP/PA) or psych team.

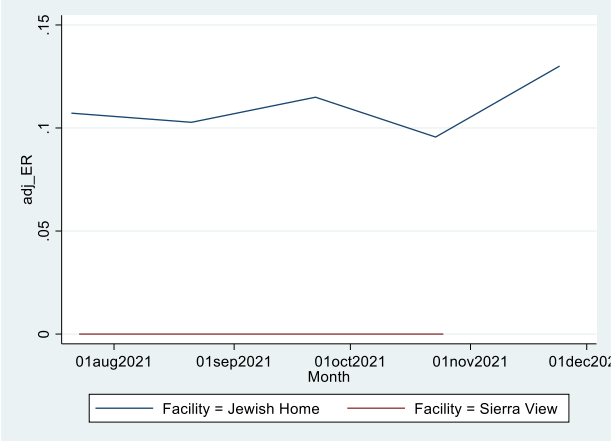
[1] Protocol was prepared by Dr. Glen Xiong, Chief Medical Advisor to the CETF Telehealth Pilot Project and in collaboration with Dr. Noah Marco, Chief Medical Officer, Los Angeles Jewish Health and Lance Granum, RN, Sierra View Homes.

Appendix 5. Tool for Facilities to Track and Report Quality Indicators

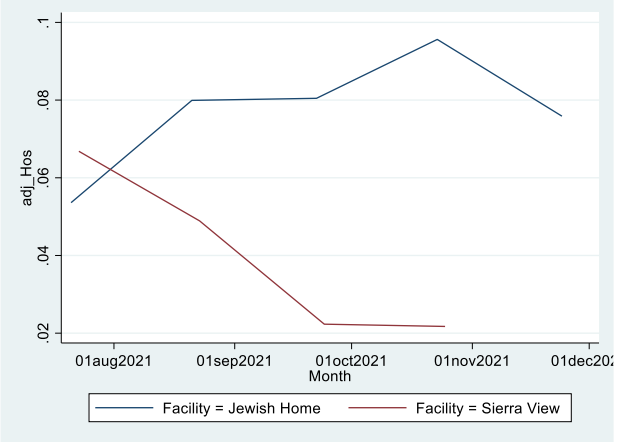
Year	Month	Site	Average Monthly Census	Whether Used Video Telehealth	QUALITY MEASURES (Please fill out monthly number of residents the following variables in your facility)									
					Emergency Room Visit Count Please fill out number of residents	Individual Hospitalization Count Please fill out number of residents	Readmission Within 30 Days Count of Residents Please fill out number of residents	Antipsychotic Medication Use (N0410A Medications Received: Antipsychotic Number Days) Please fill out number of residents.	Falls (J1900C Number of Falls Since Admission or Prior Assessment With Major Injury Code) Please fill out number of residents.	Acute UTI (I2300 Active Diagnoses: Urinary Tract Infection (UTI) Code) Please fill out number of residents.	Depression (I5800 Active Diagnoses: Depression Code) Please fill out number of residents.	Anti-Anxiety (N0400B Medications Received: Anti-Anxiety Code) Please fill out number of residents.	Hypnotic Medication (N0400D Medications Received: Hypnotic Code) Please fill out number of residents.
2021	Jul	Facility Name: (Insert)		1. Yes									
				0. No									
2021	Aug			1. Yes									
				0. No									
2021	Sep			1. Yes									
				0. No									
2021	Oct			1. Yes									
				0. No									
2021	Nov			1. Yes									
				0. No									
2021	Dec			1. Yes									
				0. No									
2022	Jan			1. Yes									
				0. No									
2022	Feb			1. Yes									
				0. No									
2022	Mar			1. Yes									
				0. No									
2022	Apr			1. Yes									
				0. No									

During the evaluation period, we received quality indicators from the Jewish Home (July 2021 to November 2021) and Sierra View (July 2021 to October 2021). Trend information is shown in the following graphs. These numbers represent the number of each quality indicator divided by the average monthly census in each facility.

(1) Adjusted Emergency Room Visit Count

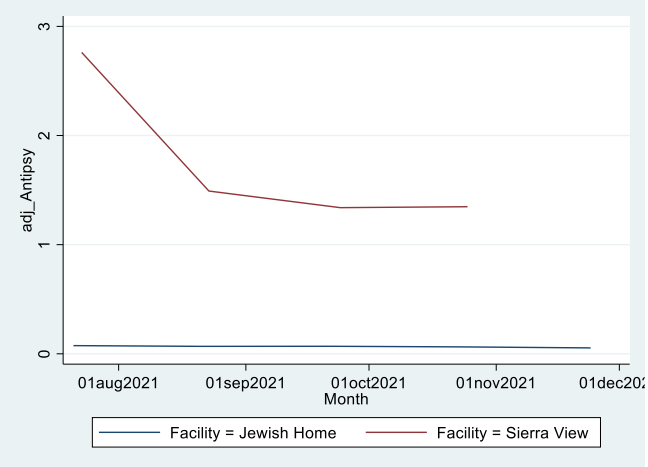


(2) Adjusted Individual Hospitalization Count

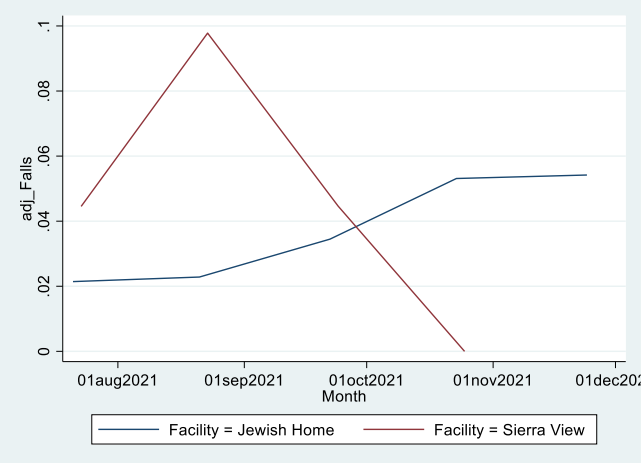


(3) Adjusted Readmission Within 30 Days Count

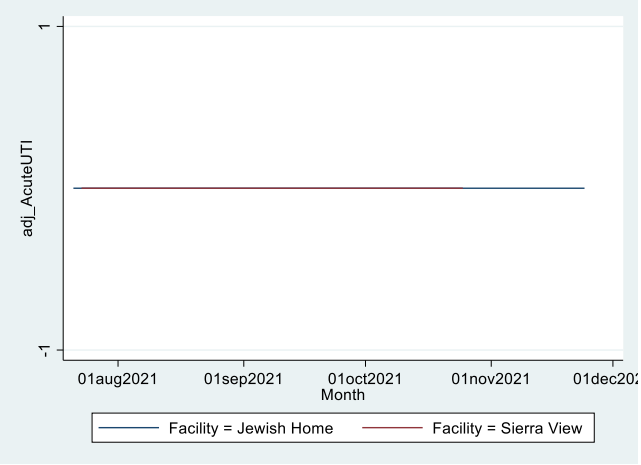
(4) Adjusted Antipsychotic Medication Use Count



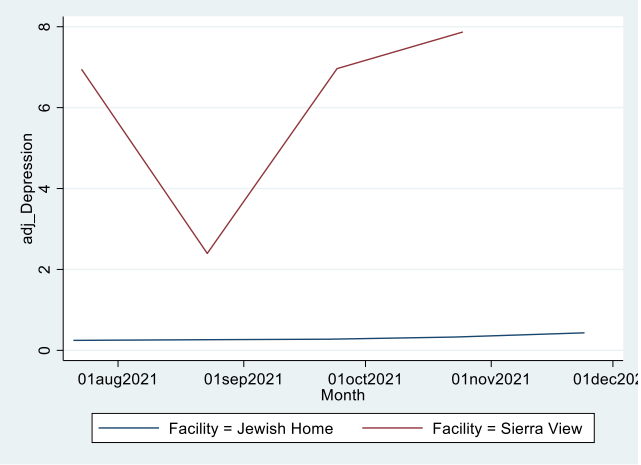
(5) Adjusted Falls Count



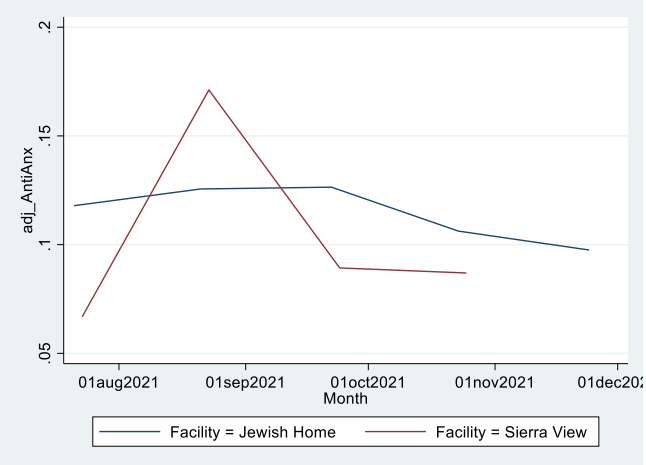
(6) Adjusted Acute UTI Count



(7) Adjusted Depression Count



(8&9) Adjusted Anti-Anxiety or Hypnotic Medication Count



Appendix 6. Advantages of Using Telehealth Equipment in SNF Clinical Encounters to SNF Staff

ADVANTAGES OF USING TELEHEALTH EQUIPMENT IN SNF CLINICAL ENCOUNTERS TO SNF STAFF[1]

- **Reduces transfers out of the facility**
  - Transferring a resident out is a lot of work for nurses and is very time consuming.
    - Numerous phone calls to family, ambulance, ER, hospital, and clinicians.
    - Copying records.
    - Closer monitoring until ambulance arrives.
    - Discontinuing all the orders then rewriting them upon return.
  - Transfer out makes a new admission more likely.
    - Not all transfers out return.
    - Admitting a new resident is the most time consuming activity.
    - Admissions do not consistently occur when staffing is at its richest.
    - If transfer not replaced than administrators get anxious and may reduce shifts available for nurses.

- **Reduces the number of phone calls**
  - Family connects at time of visit and direct communication between doctor, nurse and resident.
  - Less back and forth between physician and nurse.
  - Less upset families that are concerned because they do not know what is going on, or assume that nothing is being done because they cannot see for themselves.

- **Reduces the number of tests ordered**
  - Doctors have higher confidence that they know what is going on so they do not order as many tests.
  - Ordering tests is time consuming.
  - Nurses often have to drop everything and facilitate the lab technicians.
  - Phone calls to clinicians and family are reduced since less tests ordered.
  - Reduction of need to scan test results into medical record.

- **Reduces nurse stress**
  - Nurses and doctors are more confident with the diagnosis and treatment plan.
  - Less physician anxiety and therefore less physicians with behavioral issues.
  - Less work on low value activities provides more time for higher value work.

- **Reduces nurse turnover**
  - Increased job satisfaction.
  - More loyalty to organization that invested in resources for better clinical outcomes.
  - Could improve staffing ratios since less nurse turnover and absenteeism.
  - Pride in organization that is industry leader and easier to recruit new staff.

[1] Dr. Noah Marco, Chief Medical Officer, Los Angeles Jewish Health (LAJH), prepared this document based on the advantages LAJH experienced using Telehealth.

Appendix 7. Change of Condition (COC) Types of Clinician Contact

Change of Condition (COC) Types of Clinician Contact[1]

System	Condition	Telehealth Contact Preferred	Telephone Contact Preferred
General			
	BP or Pulse out of range	Y	
	Weakness	Y	
	Fall	Y	
	Worsening independent mobility	Y	
	Fever	Y	
	Abnormal Lab test		Y
	Abnormal x-ray		Y
Neurologic			
	Confusion, Delirium, Less alert	Y	
	Possible CVA	Y (if not 911)	Y (if 911)
	Head Injury		Y
	Seizure		Y
	Hallucinations or Delusions		Y
	Anticipating new or increased dose of antipsychotic medication	Y	
Respiratory			
	RR< 10 or >35		Y
	O2 Sat <90%	Y if up with O2	Y if not up with O2
	Dyspnea, SOB, Abnormal breath sounds	Y	
	Cough without respiratory distress		Y
	Cough with respiratory distress	Y	
Cardiovascular			
	Chest Pain		Y
	New Irregular rhythm BP OK	Y (if BP OK)	Y (if BP low)
	c/o palpitations and rhythm OK	Y	
	New or worsening edema	Y	
	Color changes to extremities or lips	Y	
Gastrointestinal			
	Abdominal pain or GT out		Y
	Nausea/vomiting		Y
	Diarrhea/constipation		Y
	Hematemesis or hematochezia		Y
	New Jaundice	Y	
Urogenital			
	Suspected UTI	Y	
	Reduction in urine output	Y	
	Hematuria		Y
	Flank pain, r/o kidney stone	Y	
	Urinary catheter issues		Y
Muscular			
	Extremity, joint, back pain		Y
	Joint swelling or color change	Y	
	Extremity swelling or color change	Y	
Skin			
	Bruises		Y
	DPI or ulcer		Y
	Rash	Y	
	Skin tear		Y

[1] Prepared by Anton Domingo, RN, Director of Telehealth, Los Angeles Jewish Health to guide clinical staff to determine under what COC to use Telehealth or Telephone for patient visit with doctor.

Appendix 8. FAQ of PALTC Nurses Regarding Telehealth

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FAQ of PALTC Nurses Regarding Telehealth

- Will it change the time we spend discontinuing orders and entering orders?
    - It decreases transfers and therefore eliminates the time discontinuing orders and re-entering the orders upon return.
    - It can decrease new admits (the most time consuming process for nurses) because less discharges lead to less empty beds.
    - Since doctors could be sitting at their computers, they may increase the orders they put into the E.H.R rather than asking nurses to input the orders.
- How will it decrease the calls we have to take or make?
    - Rather than nurses calling family with doctor's recommendations or calling the doctor the doctor with the family's concerns, family members can connect with doctors directly, at the time of the physician's visit.
    - Less calls to upset families because they are less likely to have anxiety, and fear, because they directly see the doctor and patient. Anxious, fearful and untrusting families are very stressful and time consuming for nurses.
    - Less calls to doctors with test results and request for re-admission orders.
- Will it decrease or increase the time spent ordering and following up on tests?
    - Doctors are less likely to order tests when they can directly question and examine their patients.
    - Telehealth decreases the time nurses spend putting in the orders for tests, stopping other tasks when the phlebotomist or x-ray technician comes on site, and decreases the calls back to the physicians with results.
    - Not unusual for doctors to give nurses more orders when they are called with test results.
- How will it affect my anxiety and stress levels?
    - Both doctors and nurses are more confident with diagnosis and care plans which is a key source of nurses' stress.
    - Doctors might be more pleasant in their encounters with nurses because they can do the visits in their preferred setting and may have more trust with staff.
    - With the time saved not doing low value tasks, nurses can spend more with their residents, and do what they love the most. Listening and talking to their patients.
- Nurse turnover is a big issue. Can telehealth help that?
    - Since it can increase job satisfaction, and reduce workload, it should also reduce nurse turnover.
    - Staff feel better knowing that their organization invested in new technology that is staff and patient centered.
    - It builds nurses' feelings of being valued when they participate in visits with doctors and their thoughts are heard.

Appendix 9. Top Ten Telehealth Questions and Answers

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TOP TEN

Telehealth Questions and Answers

1. **What is Telehealth?**
   - ✓ Telehealth is the exchange of medical information from one site to another via electronic communications. It allows patients and clinicians to be in two different locations and provides the clinician information to educate, diagnosis, and treat health conditions.
2. **What is the difference and TeleHealth and TeleMedicine?**
   - ✓ The two terms are often used interchangeably. The word Telemedicine is most commonly used for when the interaction is for clinical education and diagnosis whereas the term telehealth also includes things like robotic surgery via remote access or home monitoring through continuous sending of patient health data.
3. **Is it safe for me to discuss confidential information using telehealth?**
   - ✓ Yes. All telemedicine sessions are safe, secure, encrypted, and follow the same privacy (i.e., HIPAA) guidelines as traditional, in-person medical appointments.
4. **Why do I have to provide written consent for it?**
   - ✓ Current laws specify that prior to using this type of technology, the individual receiving services must be informed of the benefits and potential risks of participation. This is similar to completing consent forms prior to any medical procedure.
5. **Is my insurance company going to be billed for it and will they pay for it?**
   - ✓ Possibly. A clinician can bill insurance providers when the use telehealth technology. There are strict governmental rules and requirements around this issue. Insurance company paying for it depends on the insurance company. Medicare will reimburse for telehealth services under certain circumstances. The circumstances are expanding and many of the restrictions were eliminated during the COVID-19 pandemic.
6. **Will I have to pay anything for it?**
   - ✓ In most cases, no. Insurance companies can charge a co-pay or fee when their members use telehealth technology. Most do not. Therefore, it is best to check.
7. **Who can see the images or hear the sounds that are sent?**
   - ✓ Only the people within visual and hearing range of the persons using the equipment. Typically, clinicians use headphones to limit anyone around them from hearing the session. Sessions should be in areas that limit others hearing or seeing anything.
8. **What happens to the images and sounds when the session is done?**
   - ✓ No recordings are made of the telehealth session. No sounds or images from the interaction are forwarded to anyone else or placed into your medical record.
9. **Does this mean that I cannot request that my doctor see me in person?**
   - ✓ No. You can always request that your clinician see you in person. This technology helps your providers care for you at times that they are not able to see you in person.
10. **Do I need to know or learn how to use the equipment?**
    - ✓ No. A trained member of our team will connect with the clinician and will be present throughout the session unless there is time you want them to not be present.