Supplementary Table S1. Questions from the Nursing Home Information Technology Maturity Survey used to calculate the total telehealth score.

| Survey Question |
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| 1. Telemedicine for evaluation of residents and pre-transfer arrangements * |
| 2. Telemedicine for transmission of diagnostic images and/or consultations and second opinions * |
| 3. Electronic reporting of laboratory test results to nursing home * |
| 4. Electronic transmission and reception of laboratory results for interpretation (e.g., pathology)* |
| 5. Telemedicine for results capturing and interpretation by radiologists* |
| 6. Remote order entry for medications from locations outside of the nursing home (e.g. MD access from home, office or clinic)* |

*questions scored on 0-7 scale with 0 = "not at all" and 7 = "very much"


Supplementary Table S2. Qualitative Interview Guide.

Introductory prompt: Tell me about how you/your nursing home was using telehealth before the COVID-19 pandemic and now you are using it today.

| Person | • What motivates you/your nursing home to use TH? |
| --- | --- |
| | • How have you/your staff been trained to use TH? |
| Technology | • What types of devices are you using for TH visits? |
| | • What types of software/applications are you using for TH visits? |
| Tasks | • What types of visits are you/residents at your facility using TH for? |
| Physical Environment | • Who is responsible for setting up TH visits? |
| | • Who is responsible for facilitating the TH visit? |
| | • Who is physically present for the TH visit? |
| | • Where are you conducting TH visits at your facility? |
| Organization | • How were you using TH before the COVID-19 pandemic? |
| | • Are you billing for TH visits? |
| | • How are you/your staff documenting TH visits? |
| | • Has increased use of TH at your facility impacted staffing? If so, how? |

Supplementary Table S3. Qualitative Results.

| Theme (from SEIPS Model) | Subtheme | Category | Exemplar | Positive (n=8) | Negative (n=8) | Total |
|---|---|---|---|---|---|---|
| Person | Training for TH | No training | "I think there were technical glitches. Some of that had to do with the fact that the initial set-ups maybe weren't correct and the fact that there was no formal training on anything. You basically just kind of, you know, click this link and sign-in with this password and then we'll shoot from the hip kind of thing." (admin, negative TH score) | 3 | 8 | 11 |
| | | Some training | "The company [nursing home] itself is very progressive and it's a small company. They got it set up in most of our own facilities. They okay'd it and they provided the training for it." (admin, positive TH score) | 5 | 0 | 5 |
| | Motivation* | Improved resident safety | "We didn't want them to be exposed. They were suggesting telehealth visits, especially for the vulnerable population. You know, we don't want them out there, and the less exposure, the less risk, that's what we're about." (clinician, negative TH score) | 7 | 7 | 14 |
| | | Saving transportation associated costs | "To not have that expense of the transport if we're not transporting them. It absolutely is a much less expensive choice to be able to do telehealth." (admin, positive TH score) | 4 | 4 | 8 |
| | | Improved communication | "At the end of someone's shift when you ask, hey how was that telehealth, they'll say it was a benefit to be there for the appointment. The nurses are taking the 15 minutes, half hour to be in there with the resident that otherwise they wouldn't." (admin, positive TH score) | 5 | 2 | 7 |

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| | | Improved quality of care | "So they actually have [care] when they need it. Some of them are seen several times in a week because there's something going on that requires extra intervention as opposed to the once a week or once a month or whatever the physical cycle is. So the telehealth lets them get seen more frequently, when they need the more frequent visits." (admin, positive TH score) | 3 | 1 | 4 |
| | | Saves time | "For us being rural, and people having to travel, you know 20-25 minutes, it does mean that perhaps the physician is able to spend more time with the resident instead of on the road." (admin, negative TH score) | 2 | 5 | 7 |
| Technology | Hardware* | Tablet | "Just exclusively iPads. We are a smaller company. We don't necessarily have the capabilities of some of these bigger corporations. I know I've seen the hospitals and other nursing homes have the big telehealth, you know, movable stand that has equipment on it, but we just kind of made do with what we had." (admin, negative TH score) | 8 | 8 | 16 |
| | | Laptop | "It's equipment we already had. All of our nurses have laptops." (admin, positive TH score) | 3 | 4 | 7 |
| | | Integrated equipment | "The provider runs it at all from their desk. The camera is like, you know, 360 [degrees]. They have a stethoscope on the machine that they can use and all of that." (admin, positive TH score) | 3 | 0 | 3 |
| | | Smart phone | "The nurses do sometimes use their phones too. They'll click on a link and just connect that way." (clinician, negative TH score) | 0 | 3 | 3 |
| | Software* | Video-conferencing | "It's either Zoom or FaceTime" (admin, positive TH score) | 6 | 6 | 12 |
| | | Secure Platform | "I know some of our physicians are using, I think it's called Doxy.me and that, you can actually go to the physician's website. So, you go to the office website and there's a link there, and you go into a waiting room and they get your appointment that way. Sometimes it's a text. Like they'll text you the link. So it's kind of all over." (clinician, negative TH score) | 3 | 3 | 6 |

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| | | Patient Portal | "Each provider has a different format, so they use Zoom, they use Doxy, they use the patient portal. For instance we do have some residents, that have [medical group] so they have their patient portal. I'm able to access the portal and go into that session." (clinician, positive TH score) | 2 | 0 | 2 |
| | Setting up the TH visit | NH nurse | "So it's like, oh do we have that one [app] loaded on that laptop? So, you know, the nurse managers would typically do that." (admin, positive TH score) | 6 | 6 | 12 |
| | | Provider staff | "The company that the house doctor works for has a medical office assistant that's here five days a week that will do the telehealth visits and will go in there, turn on the equipment and stuff" (admin, positive TH score) | 2 | 1 | 3 |
| | | Other NH staff | "I am the Admissions Coordinator, but I don't solely do admissions, I'm pretty much running the telehealth program here in the nursing home" (clinician, negative TH score) | 0 | 1 | 1 |
| Physical Environment | Who is present | Resident and NH staff | "The nurse can go in there, they can do a telehealth with the patient right there as well." (admin, positive TH score) | 7 | 4 | 11 |
| | | Resident only | "[The nurse] typically leave; only at the request of the resident if they want them in there." (admin, negative TH score) | 0 | 3 | 3 |
| | | Resident and medical assistant from MD office | "We're going to be hiring a medical assistant to act as our originator. And I think that's a model I've heard, that seems to be a reasonable model, because then we won't bother the nursing home for any staff." (clinician, positive TH score) | 1 | 1 | 2 |
| | Space for the TH visit* | Private room | "Our rooms are all private here, we don't have any shared rooms so they're in their rooms." (clinician, negative TH score) | 4 | 4 | 8 |
| | | Semi-private room | "We have a mix of both, mostly semi-private. So that's another barrier is giving the privacy in the room when the roommate doesn't want to leave" (admin, positive TH score group) | 3 | 3 | 6 |

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|---|---|---|---|---|---|---|
| | | Other room in the NH | "So, we do take the resident to a private area. Usually we have a dining room that we're not using right now so we're able to use that so that the resident can have privacy." (admin, negative TH score) | 2 | 3 | 5 |
| Tasks | Type of visit* | Consultation/ Specialist | "We're doing cardiology follow ups, endocrinologist, orthopedic, neurology, everything telehealth, which is pretty incredible" (admin, positive TH score) | 8 | 8 | 16 |
| | | Routine/ follow-up | "For a follow-up visit with the doctors it works really well because the doctor has initially seen that person in the office." (clinician, negative TH score) | 8 | 5 | 13 |
| | | Change in condition | "Last week we had one resident who was very acutely sick and so, our director of nursing had our medical director's partner on FaceTime in the room just kind of assessing from afar." (admin, positive TH score) | 6 | 1 | 7 |
| Organization | Pre-COVID use of TH | No | "I believe the best way to describe how we were using it before the pandemic was, we were not." (admin, negative TH group) | 5 | 7 | 12 |
| | | Yes | "As far as telehealth prior to COVID we really didn't do very much. I mean there might be, you know, somebody who had a physician up in the [city] area. And so we would [use it] occasionally." (admin, positive TH score) | 3 | 1 | 4 |
| | Billing for TH | No | "We don't bill for the [telehealth] visit just because the provider is doing it." (admin, negative TH score) | 4 | 8 | 12 |
| | | Yes | "So probably the biggest issue that we have is getting paid for it. We have been billing for it, but it has been something that's been totally brand new. And getting the information from the charge nurses that they have done a telehealth visit with a physician, has not necessarily been consistent." (clinician, positive TH score) | 3 | 0 | 3 |
| | Document-ation | Nurse documenting in the NH EMR | "They [nurses] document it in the EMR. They just say telehealth visit completed with whoever and then they put the orders in and kind of summarize the visit." (admin, positive TH score) | 5 | 6 | 11 |

| | Provider documenting in the NH EMR | "The nurses, go with an iPad to the room and the physician does their visit. Then they document in our EMR. The physician does." (clinician, positive TH score) | 3 | 2 | 5 |
|---|---|---|---|---|---|
| Inter-operability barrier | Yes | "Our lab has a portal that we use, but providers don't really get into it. So that is a problem, you're literally typing in to the chat on whatever their app is, blood pressure was this and their vitals. So that's a difficult thing because providers use so many different things in order to do their visits." (admin, negative TH score) | 3 | 8 | 11 |
| | No | "I think it depends on who you ask but I think having all of the information firsthand definitely outweighs the time it takes away from other things." (admin, positive TH score) | 5 | 0 | 5 |
| Staffing | NH has added what staff must do | "I haven't added staff. I've just added to what the staff have to do." (admin, negative TH score group) | 8 | 8 | 16 |
| | NH has added staff for TH | "We have not been able to change the staffing, because there is no staff available." (admin, negative TH score) | 0 | 0 | 0 |

* Total for these subthemes may not add up to 100% as multiple responses (categories) are possible.