

Exploratory study of Google Nest Hubs in the long-term care setting in Manitoba



December 2021

In the winter of 2021, the Centre on Aging provided Google Nest Hub devices to 80 personal care homes/supportive housing residences as a method of communication and entertainment for the residents and staff. Following this, we conducted an online survey to evaluate the experiences in setting them up and using them.

Survey participants

In total, 30 people (86.2% female) completed the online survey, which consisted of 34 questions. Of the total 30 participants, 20.7% were between the ages of 20 to 29, 27.6% between the ages of 30 and 39, 20.7% between the ages of 40 to 49, 24.1% between the ages of 50 and 59, and 6.9% above the age of 60. The majority of participants (69%) had worked in long-term care for over 5 years. An additional 13.8% had worked in the sector for 3 to 5 years, 3.5% for 1 to 2 years, and 13.8% for less than a year. The vast majority (75.9%) of respondents listed their primary type of work as recreation, while 10.3% listed administration, and 3.5% noted nursing as their primary type of work. One participant worked in management, another in allied health, and the final participant in fundraising and communications.

Most of the respondents (86.2%) reported on behalf of a personal care home, while the other 13.8% on behalf of a supportive housing residence. Around three quarters of these facilities (75.9%) belonged to the Winnipeg Regional Health Authority, with lower percentages from the Southern (10.3%), Interlake-Eastern (6.9%) and Prairie Mountain (6.9%) Health Authorities. The number of residents in these facilities varied, with 27.6% reporting between 1 and 49 residents, 17.2% reporting between 50 and 99 residents, 34.5% reporting a resident total between 100 and 149, and the remaining 20.7% reported having more than 149 residents.

Google Nest Hubs distribution

The average number of Google Nest Hub devices received by each facility was 3.3 devices. At the time of completing the online survey, 86.2% of the facilities had setup at least one Google Nest Hub, and only 4 facilities had not yet set up a Google Nest Hub device. Of the 25 respondents that reported at least one device had been set up, the majority (86.2%) stated that the recreation staff was responsible for the set-up, while 2 reported that administration staff set-up the device.

Other staff that set up the devices included technical staff, maintenance and nursing, communications, and a social worker. Only 5 participants reported technical difficulties setting up the hub, with 3 citing issues with their facilities' Wi-Fi network as the reason for the difficulty. All other respondents reported no issues in the set-up.

Google Nest Hub users

Once set-up, these devices were used by a wide range of individuals. When asked who is using the Hub, participants reported that the group which used the devices most were the recreation staff (88.5%). Other common responses were the 'residents on their own' (46.2%) and 'nursing staff' (42.3%). Other users included tenant companions (11.5%), technical staff (7.7%), families of residents (7.7%), and administrative staff (3.9%).

Additionally, the location of the Hub in the facilities varied. The most common location of the device was the recreation room/multipurpose room (55.9%), followed by the dining room (42.3%) and lounge (42.3%). Other locations included individual resident rooms (15.4%) and nursing stations (15.4%). Furthermore, 30.8% of the participants stated that the Hub moves from place to place.

Using the Google Nest Hub

Use of the Nest Hub has been similarly varied. The most common uses of the Hub by the residents as reported by the participants are listening to YouTube music (87.5%), getting the weather forecast (66.7%), watching YouTube videos (54.2%), orienting to the day (37.5%), telling jokes (37.5%), and seeking information/asking the device questions about any topic (37.5%). Other uses included watching the news, listening to the radio, translating, showing pictures, singing happy birthday, and video or audio chats with family and friends. Additionally, when asked if the use of the Hub is seen as sustained and ongoing, or gimmicky and short-term over two-thirds (68.2%) reported it was seen as sustained and ongoing, 27.3% stated it is a mix for different residents, and only 1 participant reported that it is gimmicky and short-term.



87.5%

the most common use by residents was listening to YouTube videos



25%

surprised by the ease of use of the Google Nest Hub

When asked all the ways in which the staff at the facility have used the Hubs, listening to YouTube Music was again the most popular use (87%), followed by getting the weather (69.6%), watching YouTube videos (60.9%), and seeking information or asking Google Nest Hub questions about any topic (52.2%). All the previously listed uses by the residents of the facility were also reported to have been done by staff, with additional uses of ‘broadcasting messages for residents’, and ‘staff administrative tasks or information (calendars etc.)’ being reported. Participants were also asked what they thought the most surprising aspect of the Google Nest Hub was. The ease of use was the most popular response (25%), followed by the ease of set-up (15%), the resident’s embrace of the new technology (15%), and the variety of uses (15%).



TOP 3

uses for the Hub: music, weather, YouTube videos

Participants were then asked to list the top three ways they are using the hub. The most common ways listed, in descending order of frequency, were music, weather, YouTube videos, finding facts and information, orienting to the day, and telling jokes. Next, participants were asked to list the top three most beneficial aspects of the Google Nest Hub devices for residents, and then for staff. Regarding residents, the most listed beneficial aspect was again the ability to listen music. Specifically, attention was brought to the ability to request a wide variety of songs on demand, the residents reminiscing about these songs and bands, and one respondent claimed that the music was bringing residents together. Other common responses, in descending order of frequency, were the ability to answer questions, the ease of use, and the independence it affords the residents. Regarding the most beneficial aspects towards staff, music was once again the most popular response, followed by ease of use/convenience, gathering information, and assisting with job activities.

In addition to being asked to list positive aspects of the Google Nest Hub devices, challenges surrounding the device were also investigated. The participants were asked to list the top three challenges or concerns with using the Google Nest Hubs. The most common category of challenge listed by participants was challenges around speaking to the Hub. This included remembering to say “Hey Google” before a command, and the Hub having difficulties understanding residents. Other challenges, in descending order of frequency, included issues connecting to Wi-Fi, challenges associated with residents’ levels of comfort with technology, and privacy concerns.



challenges were remembering to say “Hey Google” and the Hub not understanding residents’ speech

Furthermore, participants were asked to report any features that did not work. Only 12 responses were submitted, and the feature that most commonly gave participants trouble was the Google Nest Hub failing to recognize the speech of some residents (25%). Other features listed multiple times were not having appropriate Wi-Fi connection (16.7%), having to say “Hey Google” before a command (16.7%). In addition, issues with the volume of the device, the screen size being too small, and the device sometimes playing the wrong song were each reported by one participant. When asked specifically if there were any challenges with using the voice commands or residents understanding what the Google Nest Hub says, only 38.5% reported there were challenges, while 61.5% reported no challenges.

We also investigated the experiences of the 4 participants who had not yet set up a Google Nest Hub device. When asked why they had not set up a device, Wi-Fi being problematic was given as the reason by 2 participants, the pandemic and corresponding restrictions on residents by 2 participants, technical issues other than Wi-Fi once, and privacy issues once. All four indicated that they plan on using the device in the future when circumstances change. When asked what they plan to use the device for, plans included using it for various activities such as trivia and music, and asking the Nest Hub questions.

Conclusion

In conclusion, from our initial analysis, it seems like the experience of the Google Nest Hubs from the various personal care homes and supportive housing residences was largely positive. Most individuals had no issues setting up or using the devices, and of the few challenges faced, most were minor. The use of these Hubs has been impressively varied, as many different individuals are using the devices for a variety of activities/tasks. We look forward conducting interviews with staff who have used the Google Nest Hub devices to learn more details about the benefits and challenges of using these devices.



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