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The potential implications and inequalities in the care of older people in a post-COVID world: An autoethnographic account

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Abstract

Healthcare smart homes have been positioned as a potential innovative solution to the current global ageing crisis and an alternative for the care of older people within a post-COVID-19 world. However, such innovations have emerged within a dominant discourse in which older people are framed and pathologized as societal burdens. This autoethnographic paper, based on my reflections and recent (but pre-pandemic) ethnographic fieldwork with older residents of healthcare smart homes, explores the potential changing landscapes of care and home that older people may experience in a post-COVID-19 world. Previously, these homes were associated with wellbeing, choice and autonomy, however, with the negative impacts of COVID-19 on care homes and the care sector, healthcare smart homes and digital-by-default care may become the prominent means for the future care of older people. I argue this may cause increases in the social, economic and geographical inequalities around access to smart healthcare technologies. Many of these inequalities are experienced more strongly by individuals from different intersectionalities including age, disabilities and class. Furthermore, potential feelings of autonomy experienced by older people using smart healthcare technologies may be reduced when a post-COVID-19 move to digital-by-default health and social care becomes a necessity rather than a choice.

Keywords: COVID-19, ageing, healthcare, smart homes, autonomy

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Introduction

In March 2020, when the UK government first announced that adults aged over 70, those who were eligible for the flu vaccine and pregnant women should shield for 12 weeks, one of my first concerns was for my key research participants and their support networks. I had just spent the last six or so months getting to know each of them personally, and so knew of the importance they placed on being able to get out and about in their communities, be that to participate in community events, or even just to walk their dogs or go shopping. Yet, through lockdown and the implications of COVID-19, my key participants, all of whom were aged over 70 and lived with multiple chronic conditions and disabilities, were being asked to completely change their routines in a way that was not of their choosing. They had each spoken at length of the importance of having routines and things that they did every day, week or year to maintain a sense of independence and normality. For Angela, this was swimming in the sea regularly; for George, this was attending his poetry groups and his lunch clubs; and for Iain, it was being able to move to a new house. Meanwhile, for Georgette and Geoff, it was being able to walk their dogs. Each relied on carers (be they formal or informal) to some extent, and so this was likely an additional worry. One of the first things I did was text George, as he lived by himself and his daughter lived further away, to let him know I was happy to help him by leaving food on his doorstep for instance. This would have been possible because George, unlike my other key participants, lived near to me. However, I remember being hesitant to do so given that George had often spoken at length at not wanting to be considered old or as a person requiring, rather than providing, support. So, I was worried my offer of assistance might be construed as patronising.

In this paper, I reflect on the potential implications of the COVID-19 pandemic on my research participants (from recently completed ethnographic fieldwork), and how this may signal the need for a reimagining, or re-constructing, of some of the components of the dominant healthcare smart home narrative and the future care options for older people. Specifically, the suggested benefits of greater wellbeing, choice and autonomy in healthcare and housing decisions from healthcare smart home living (Liu *et al.*, 2016; Bennett, Rokas and Chen, 2017) may need to be reconsidered. In addition to autoethnographic reflections, I draw on my recent (but pre-pandemic) ethnographic research which explored the experiences of older people who live in rural healthcare smart homes in Scotland, and their wider caring networks, to highlight the potential texture of lived experience (Ellis, Adams and Bochner, 2011; Lake, 2015; Hine, 2019) before, during and after COVID-19. A universally agreed definition of the smart home does not exist, but it is generally considered to be a residence that contains a communications network and linked devices which can be 'remotely monitored, accessed or controlled and which provides services that respond to the needs of its inhabitants' (Balta-Ozkan, Boteler and Amerighi, 2014:

66). The idea originally emerged in the 1930s under the guise of the luxury home of the future, and over time emerged as a means of improving and controlling energy use within the home (Darby, 2018). Recently developing these homes for managing healthcare conditions, especially in older age, as a means of proactive and preventative healthcare measures have become more popular, in the form of healthcare smart homes (Liu *et al.*, 2016; van Hoof, Demiris and Wouters, 2016).

I will first offer some context on healthcare smart homes and introduce my fieldwork methodology and some of the key participants from which this paper was conceptualised. This will be followed by a reflection on how the COVID-19 pandemic is shifting the landscapes of care and home, particularly for and within specific inequalities and intersectionalities. I follow this with a discussion on the potential impact of the role of choice and autonomy (or lack of) around care in the home of older people when a digital-by-default health and social care system may be sought after COVID-19. Throughout the paper, I will highlight how different intersectionalities, specifically, social standing, economic standing and age may lead to differing impacts in a digital-by-default future home care system.

Introducing healthcare smart homes

Healthcare smart homes are digitalised homes that allow an older person to remain independent and promote their wellbeing through the use of technology at home (Bennett, Rokas and Chen, 2017; Majumder *et al.*, 2017; Burrows, Coyle and Gooberman-Hill, 2018). Examples of such technology include wearable fall alarms, remote GPS trackers and portable heart rate monitors, as well as more ubiquitous smart technologies such as smart speakers. These homes are suggested by some policy-makers and developers (Layzell, Manning and Benton, 2009; Peine and Neven, 2020) as a potential innovative solution to a series of wider societal issues related to a global ageing population, specifically: reducing the burden on health and social care services (Weicht, 2013); increasing opportunities for ageing-in-place (at home) (Aceros, Pols and Domènech, 2015); the changing spaces of care in times of austerity, promoted as greater choice and autonomy (or responsibilisation) in healthcare and housing decisions as we age (Bevir, 2016; Power and Hall, 2018); and sustaining rural communities (Philip and Williams, 2019).

With recent sustained funding cuts to the public health and social care sectors across much of the Global North (Hooyman and Kiyak, 2011; Powell *et al.*, 2016), and a related focus on neoliberal government policies that both create and perpetuate the impacts of these cuts by emphasising on an individual’s own (rather than the State’s) responsibility for their health and social care (Sakellariou and Rotarou, 2017; Standring and Davies, 2020), there has been an increased reliance on the private sector to deliver some of these health and social care services (at a cost to the patient or public health sector). This shift has allowed the private sector to directly compete with the underfunded public health services, and to offer alternative technological innovations that serve to fill the emerging gaps left behind from underfunded public health and social care services (e.g., devices to remotely monitor blood pressure or heart rates, or off-the-shelf DIY smart devices such as voice-assistants (e.g. Alexas, Siris) to encourage routine medication taking or to monitor conditions such as diabetes). However, much of these private sector innovations are often motivated more by profits and may not necessarily be designed with the patient or user in mind (Hooyman and Kiyak, 2011) (e.g., a patient/user is an individual with specific wants, desires and varying levels of health). This sustained public service underfunding and focus on neoliberal policies has, in part, led to many of vulnerabilities that the pandemic has uncovered.

The use of the phrase innovative solution adds a moral angle to the discourse. As Neven and Peine (2017) argue, the use of ideographic words such as freedom, democracy and innovation, are easily understood as good and as such are morally hard to critique. The use of innovative smart technologies is presented as a triple win (Neven and Peine, 2017): for society; older people; and the economy. This innovation-focussed discourse does not immediately recognise the work and costs that are required by older people for such a triple win to occur, and can mask many inequalities concerning the care of older people (Aceros, Pols and Domènech, 2015; Golant, 2017; Neven and Peine, 2017). Inequalities, such as social, economic and geographic access to appropriate homes, care and smart technology, have intersected to an unprecedented level during the time of COVID-19. Thus, the potential implications for COVID-19 to normalise a digital-by-default approach to health and social care may serve to further heighten some of these existing inequalities for older people.

Pre-COVID-19 landscapes of care

This paper draws on ethnographic data that was collected between June 2019 and January 2020. Within this I undertook visual and traditional ethnographic fieldwork with five older people, visiting them multiple times across a year to understand their experiences of living with various smart and assistive technologies including fall alarms, virtual assistants (e.g., Alexas) and devices to help with visual impairments, as well as the impacts these homes and experiences had on sense of home and identity for my older key participants. Furthermore, I undertook interviews with multiple members of their wider caring networks (e.g., family members, care workers, technology suppliers) to understand the multiple layers and potentially competing experiences across, and between, each networkAlthough this data was collected pre-pandemic, some of the experiences and discussions undertaken with my key participants are nevertheless relevant during COVID-19 times, given the increasing reliance on smart devices for both social connection and health monitoring. Thus, some direct quotations highlighting concerns from three of my key participants who lived alone during the time of my fieldwork and continue to live alone during these COVID-19 times, have been included below to facilitate discussions within this paper. As my participants were happy for their data to be attributed them (i.e. attributable data consent was gathered) I have used their real names, rather than pseudonyms, throughout this paper.

Georgette lives alone in a small town in the Scottish Highlands. She is wheelchair-bound and so is heavily reliant on the shops and service in her local community. She highlighted some concerns around the closure of local services, relating to further moves to a digital-by-default (Philip *et al.*, 2017) society.

Georgette: Aye…. well our problem just now is losing the post office. There're no banks here, well the mobile bank comes, but the post office, well the shop that it's in is closing on the 4th of October, so I don't know what's going to happen.

Rachel: So, you'd have to go to Alness [another small town about 5 miles away]?

Georgette: Well that's the nearest [place]. You can get the money out of the hole in the wall right enough, but it's the paying the bills. I pay them in the post office.

Rachel: Would you pay for your [community fall] alarm in the post office?

Georgette: Aye, the alarm, and the light and the gas. You might be able to pay it at the co-op, because you can get electric paid in there. But I don't know how it's going to work.

Rachel: Usually you can get prepaid top-up ones there so surely you could. But it is hard.

Georgette: Aye maybe you could, but I just usually take it off my pension every week. I suppose I could do it direct debit, it's just the same more or less. I'll have to get Lynne [Georgette's daughter] to look into it for me. They've not given anybody much time; I mean it's only a fortnight away.

> *Rachel: That's true. When did they tell you?*
>
> *Georgette: A month ago. But there was a rumour going around that one of the shops was going to give them space down there. But whether they will or not I don't know. We just have to wait and see.*
>
> *Rachel: But it is hard, even if you can do it online if that's just part of your routine, where each week you go in and you do these things.*
>
> *Georgette: Aye, you go in and you collect your pension and pay your bills and do the shopping and that.*
>
> *Rachel: It keeps you doing things in your community.*
>
> *Georgette: It'll come to the point I won't be needing to go out at all.*
>
> *Rachel: That's a bit of worry of mine of making these fancy smart homes, where people can stay at home for longer, as people don't actually want to be housebound.*
>
> *Georgette: Well, that's it. It would be awful if I was stuck in a place on my own all day. I have to get out with the boss [Molly, her west highland terrier]. Then you meet people, and it makes you want to go out.*
>
> *[Meeting three with Georgette, Invergordon, September 2019]*

Meanwhile, George lives alone in Fife. He recently moved to a sheltered-accommodation flat which included some in-build assistive technology devices (e.g. fall alarm cords and a connected intercom system). He expressed concerns over his loss of identity from his reliance on his intercom alarm which he had to answer every morning to let the housing officer know that he was okay.

> *When I find that I can't…you know it's hard for me to get down on my knees no matter mind anybody else. I do rely on the care people manning the*

> *intercom you know. If I…I don't sleep well…but if I don't put off the wee signal in the box, then a wee voice comes through the intercom, 'are you alright Mr White'. It's reassuring and gives a sense of security that there's somebody there. But on the other hand, it chips away at the person.*
>
> *[Meeting three with George, Cupar, August 2019]*

Angela also lives in Fife and has lived in the same home for the last 20 years. She had begun to use more smart and assistive devices in her home but highlighted to me that she used her fall alarm to give her family peace of mind, rather than a desire to use the device to satisfy her own motivations.

> *Angela: Oh, and I've got, I must have taken it off [discussing her community alarm bracelet]. Where did I put it? I must have taken it off before the shower, I think. But I have a thing that you press [a community fall alarm] that…Neighbour X and Y…he's just retired,...but they're on the end of it.*
>
> *Rachel: Why did you get your alarm? Just precaution or because you fell?*
>
> *Angela: No, no. Just really to give family peace of mind.*
>
> *Rachel: Yeah, often it's not really for you is it?*
>
> *Angela: That's right.*
>
> *[Meeting one with Angela, Pitenweem, July 2019]*

Furthermore, each of these three key participants lived alone and within DIY healthcare smart homes (i.e. a mix and match range of smart devices rather than a fully automated and professionally designed smart home). This DIY approach to healthcare smart homes and smart and assistive devices is also what is most likely to occur during the pandemic (i.e. older people using a few specific devices, rather than moving into fully-automated and interconnected smart homes). On the other hand, Iain lived alone in Moray, and during the time of my fieldwork, he was preparing to move into a smart home to pre-emptively offer more support to help him live as independently as possible with his worsening MS. Given that he was motivated to move into this fully-fledged smart home designed with his specific needs in mind, he expressed fewer concerns than my other participants. However, some further concerns may have emerged once he had moved into his new home and had begun to use his devices, but this move happened after my fieldwork ended. Finally, Geoff, who was registered blind and lived with his wife in Fife, was generally positive about his devices, and did not express many concerns, partly because he did not have to rely on the same type of devices as my other lone-dwelling participants.

COVID-19 shifting landscapes of care and home

The COVID-19 pandemic has perpetuated many inequalities and intersectionalities within society, many of which relate to older people. This section highlights some of these perpetuations, as well as highlighting how the role of the home and desires for healthcare in the home have changed, and may change in the future, as a result of the COVID-19 pandemic.

Inequalities and intersectionalities perpetuated through COVID-19

No doubt, we can all summon examples from television, film and the wider news media, of portrayals of older people as frail and needy, or as burdens on others (Katz, 2000). Such stereotypical images are prolific and underpinned by a desire to control and exert power over others (Fealy *et al.*, 2012). As such, the unequal treatment that some older people have experienced through COVID-19 has been perpetuated through these pre-existing powerful media narratives, as they have been further stigmatised as an increased burden and risk on society. Although heightened, this use of language and framing for discussing older people and people with disabilities and underlying conditions has existed for years (Weicht, 2013; Bülow and Söderqvist, 2014; Aceros, Pols and Domènech, 2015). This pandemic has merely brought such discussions more clearly and explicitly into view.

These framings are also connected to specific inequalities that many older people experience in everyday life. Social inequalities include access to safe and appropriate housing (Hooyman and Kiyak, 2011; Colic-Peisker, Ong and Wood, 2015). Meanwhile, economic inequalities include access to appropriate care and smart healthcare technologies (Balta-Ozkan *et al.*, 2013; Currie, Philip and Roberts, 2015). And, finally, geographic inequalities are felt particularly by those in rural areas in which care may be more expensive or necessitate a move away from their home for appropriate access to care (Dowds *et al.*, 2018). Furthermore, access in terms of the well-documented digital divide (Williams *et al.*, 2016; Park, 2017; Philip *et al.*, 2017) can be felt by individuals of all ages, but often older people in rural areas are particularly impacted. The digital divide is ‘used to cover a broad range of social differences in access to and use of digital equipment and services, most notably personal computers, and the ability to access the internet in terms of both physical connection and facility of use' (Sparks, 2013: 28). For Philip et al (2017), the digital divides are therefore two-fold: 1) socio-economic digital divides; 2) divides that result from technological infrastructure inequalities. I would argue that many of these socio-economic digital divides are experienced more frequently, and strongly, by those from lower-class backgrounds (who may not be able to financially afford the smart technology devices or the internet that enables them), or for those with certain disabilities or age profiles which the technologies do not traditionally easily cater for, or at least not without an additional financial cost.

Due to the existing structures within our increased neoliberal societies (Bevir, 2016), people with a range of intersectionalities have experienced especially difficult times through the COVID-19 pandemic (Eaves and Al-Hindi, 2020; Standring and Davies, 2020). Intersectionalities are social categories which are influenced by power relations, such as race, gender and class (Eaves and Al-Hindi, 2020). There have been reports of individuals of particular ethnic backgrounds (i.e. black) being both more susceptible to the virus (Guardian, 2020a), and also often in receipt of worse levels of (or no) care (Eaves and Al-Hindi, 2020). Similarly, for gender intersectionalities, women have tended to take on more caring responsibilities during this time, in place of formal carers, nurseries and schools (Manzo and Minello, 2020). Meanwhile, there have been specific impacts on individuals from working-class backgrounds in terms of their prevalence in risky and non-furloughed jobs such as carers, bus drivers and factory workers (Guardian, 2020b), or residing in poorer housing conditions (Rogers and Power, 2020) without security or outdoor space for instance. However, in this paper, I focus on the intersectionalities of age and disability. During the UK's response to the pandemic all those aged over 70 have been grouped together in their requirement to shield (World Health Organisation, 2020), with all those over 70 treated as a risk to themselves and wider society, no matter how otherwise healthy or unhealthy they may be. Yet multiple authors have discussed the existence of a third and fourth age in later life (Bytheway, 2005; Leibing, Guberman and Wiles, 2016; Ekerdt *et al.*, 2017; Peine and Neven, 2020). The third age is a new post-retirement stage of life concerned with personal fulfilment, whilst the fourth age is a period of life associated with dependency, decrepitude and death (Ekerdt *et al.*, 2017). The COVID-19 pandemic, at least in the UK, has in some ways re-classified all older people over 70 together and perpetuated further the stereotype of all older people as frail and burdensome members of the fourth age. This no doubt caused further problems for informal familial carers, many of whom are aged over 70 themselves (AGE UK, 2017). Relatedly, those with disabilities (or underlying health conditions) have, at least within the UK's pandemic response, been dehumanised and pathologized to a certain extent (Mitchell *et al.*, 2017; Ahmad *et al.*, 2020) as ableist and normative health and social care planning still dominates within many of our societies. Furthermore, within the UK specifically, critics of the Coronavirus Act (the emergency legislation which the UK government passed at the start of lockdown) said it allowed local councils to downgrade their duty of care towards disabled and older people (BBC NEWS, 2020). For older people who also live with a disability, including several of my key research participants, this can be a double blow, as they are stereotyped and stigmatised as a risky member of society on account of both their age and disability. As such, these inequalities and intersectionalities have converged during the COVID-19 pandemic creating a potential shift in experiences of health and social care, and the home.

I also wonder if the implications of the COVID-19 lockdown will ultimately change how we, as a society, consider spaces and places of care, borrowing a phrase that Power and Hall (2018) have referred to previously as ‘shifting landscapes of care’. With the recent moves towards increased healthcare at home, will the impacts of COVID-19 make these shifting landscapes more widespread and permanent? Furthermore, older people themselves and their wider caring networks, in other words, the potential recipients of smart healthcare, may change their perceptions of the devices as a result of COVID-19. Such perceptions could be positive in terms of increased safety, empowerment and social interactions (Hargreaves, Wilson and Hauxwell-Baldwin, 2018), although without autonomy, and proper social and economic access the perceptions of use may become more negative.

Changing role of the home during the pandemic

Within the dominant narrative behind the push for healthcare smart homes, one constantly promoted benefit is the ability to live at home for longer (Burrows, Coyle and Gooberman-Hill, 2018). However, during the pandemic staying in your own home has been presented as more of a sacrifice, and something that we *have to do*, rather than something that we *get to do* as a benefit. Thus, the act of staying at home is portrayed as either a benefit and a sacrifice depending on the age, and healthiness of the resident. Relatedly then are the potential impacts of the meaning of home during, and as a result of, the pandemic. Some people will have spent their last few weeks or months isolated at home, ultimately dying alone. For others, even the fear of such a potentially isolated and lonely death will have long-lasting implications on their associations with their homes.

For authors such as Cristoforetti, Gennai and Rodeschini (2011) and Wiles et al. (2012), the home has been considered as a refuge, a site of safety, however, the impacts of the COVID-19 pandemic may alter this somewhat, with the home becoming considered a prison, even a death sentence. According to Maalsen and Dowling (2020: 2), ‘the COVID-19 crisis is accelerating the rate at which digital technologies cross the threshold of our homes and is rescripting privacy in the process’. Relatedly, will home even continue to ‘feel like home’ when everyday routines such as walking the dog, attending a lunch club, and having in-person visits from your family are removed? For some, including several of my participants, all routines in the home have moved online, and become digital-by-default (Philip *et al.*, 2017). This means that in many ways my key participants, like many other older adults, are having to simultaneously adapt to and learn new home routines including skype to call family and to order shopping online, as well as cope with the new stresses and pressures of living through a global pandemic, which may include bereavement of a loved one. Thus the home during this time has, in addition to being a potential site of safety and refuge (Chapman and Hockey, 1999), become a site of social interactions (Lee *et al.*, 2017), and ultimately through, COVID-19, a space and place of survival. In many ways, the home is becoming reclassified once more as simply a house (i.e., merely a place of shelter). Relatedly, the pandemic has reemphasised that for some, often from lower class-backgrounds or with disabilities, their homes have proven to be inadequate for their needs in terms of being safe and homely places to shield due to inadequate space or access (Eaves and Al-Hindi, 2020; Maalsen and Dowling, 2020), or lack of security due to poor renting conditions (Rogers and Power, 2020). Furthermore, necessary changes to routines in the home that smart healthcare technologies can require, such as constant surveillance and increased time spent in the home (Burrows, Coyle and Gooberman-Hill, 2018), may mean certain groups of people (e.g. older people) are less receptive to having, and using, smart healthcare in their homes.

Although, there is also a concern that the home may start to feel less secure if residents still also rely on in-person care, especially when carers may not have the correct (or enough) PPE to protect themselves and their clients from the virus. This links to Gurney's (2020) recent discussions around the home as a place of harm, especially during the COVID-19 pandemic. Furthermore, during the pandemic expectations of the home have changed, with the home now also having to be a place of work, schooling (Maalsen and Dowling, 2020) and for many older people a place of survival, in addition to the traditional characteristics of home as a place of safety and comfort. With the addition of new smart and digital devices for healthcare and social connectivity, the home is also becoming a site of communication, both with friends and family, and of one's personal healthcare data. Building on Gurney's (2020) notion of home as harm, for those who cannot, or do not wish to utilise such digital devices due to varying levels of access, the home may be becoming a place of harm – as older people become cut off from their friends, family and healthcare services. Thus, the pandemic may have amplified some of the impacts and experiences that my participants discussed in terms of living with smart (healthcare) technologies. The potential impacts of COVID-19 also draw attention to the need for greater critical discussions and research on the experiences and perceptions around not only ageing-at-home, or sheltering-in-place (Hillcoat-Nallétamby and Ogg, 2014; Aceros, Pols and Domènech, 2015), but also the potential of dying-at-home (Visser, 2019), either directly or indirectly as a result from COVID-19.

Changing desires for and of healthcare in the home during COVID-19

The actions, or inactions, of the UK government within this crisis may also heighten the desire for living in healthcare smart homes because of how the underfunded and overburdened health and social care services (Power and Hall, 2018) have been impacted as a result of COVID-19, as mentioned earlier in this paper. When speaking with my key participants, months before the start of the pandemic, many highlighted how they did not want to move into a care home or spend time in hospital because of their own (or their friend's) previous negative experiences. The pandemic has drawn increased attention to the overburdened health and social care services (Horsfall *et al.*, 2017; Kim, Gollamudi and Steinhubl, 2017; Iacovone *et al.*, 2020) in terms of shortage of staff, protective and infrastructure equipment including ventilators and hospital beds (Buckingham, 2020; Scally, 2020). There have been stories in the news of covid outbreaks in care homes, even in perceived safer remote areas like the Isle of Skye (BBC, 2020b), which has ultimately led to the abandonment of some care homes (filled with residents) (BBC, 2020a), and staff having to reuse their PPE because of shortages (Mason, 2020). These stories may increase the already existing fears and concerns of older people and their support networks, over having to move to a care home (Hillcoat-Nallétamby and Ogg, 2014; Aceros, Pols and Domènech, 2015), and so may strengthen the arguments for remaining at home with the aid of smart healthcare technology. Relatedly though, through my recent research I found that some of my key participants adopted and utilised smart healthcare technologies in their homes, not for their benefit, but to give their friends and family (i.e., their wider caring networks) peace of mind. As such, given the wide-ranging risks from COVID-19, this feeling and pressure to unburden their friends and family may be ever more present.

Also, one aspect that has not yet been widely discussed in the smart home and smart technology literature is the use of smart technology for hygiene reasons (Wilson, Hargreaves and Hauxwell-Baldwin, 2015; Marikyan, Papagiannidis and Alamanos, 2019). The COVID-19 crisis has shone a light on a potential new benefit of smart healthcare technology, in that by being able to assist at a distance, passively or through voice-activation, the physical interactions with others such as carers and family members are reduced and thus increasing safety from exposure to the virus. There are many negatives to this including potential social isolation (Sixsmith and Sixsmith, 2008) and anxiety if users face difficulties using their smart technology (Hine, 2019). However, one advantage is the potential benefit of less human contact for increased hygiene levels (and thus less likelihood of passing on potentially deadly viruses) (Maalsen and Dowling, 2020).

As such, the desires for smart healthcare at home, especially from policymakers and the wider caring networks of older people, may be increasing as a result of the shifts towards digital-by-default healthcare during the pandemic, as care homes become increasingly risky and home care staff have been often ill-equipped with appropriate levels of PPE. However, moves to digital-by-default care may reduce the potential positive benefits such as wellbeing, empowerment and autonomy of and for older people. In turn, this may reduce the feelings of homeliness for older people who now have to, rather than choose to, live at home for longer because of numerous external pressures (Bennett, Rokas and Chen, 2017; Burrows, Coyle and Gooberman-Hill, 2018). I will now discuss this potential issue in more detail in terms of these shifting landscapes of choice of care at home.

Discussion: The role of choice in care in the home in a post-COVID-19 world

A key implication of the COVID-19 pandemic concerning the care of older people through the assistance of smart technology must be around the changing notion of choice and empowerment.

Choice within a post-COVID-19 healthcare smart home

When I was undertaking my fieldwork, my key participants were using their smart (healthcare) technologies out of choice, to some degree, however, this level of choice was in some cases instigated by their children, and in some cases their wider caring networks. Nevertheless, it was a choice and as such had some empowering benefits because of the activities it enabled the users to carry out, such as using Alexa as a memory aid or being able to continue living alone or cook for oneself at a time of their choosing. However, these empowering benefits and level of choice may be somewhat lower for those adopting smart (health) technologies out of necessity during COVID-19 lockdown, as this was generally considered the less-risky option. For example, older people who were required to shield for (initially) 12 weeks may have been somewhat forced (because of lack of alternative viable options for care and socialisation) to adopt new smart technologies for interacting with their families living elsewhere, for organising shopping and for talking to their GPs. Many of these risks were heightened because of the inequalities that many older people face every day in terms of a poorly funded home care sector resulting in low carer retention rates. This means that older people rarely have a single dedicated carer, and thus both carers and clients are exposed to a greater number of people. Furthermore, looking to the future, older people from lower-class backgrounds (i.e., with likely fewer lifetime savings) may be at a disadvantage if they do not live in the right location and/or they cannot afford to install and maintain certain privately commissioned smart healthcare technologies in their home (e.g., broadband or voice assistants). This puts them at a disadvantage if or when their healthcare becomes digital-by-default. Thus, the potential empowering benefits may be reduced as use of these technologies becomes more a matter of life or death rather than an empowering choice. Although understandable at the height of the pandemic, the risk of COVID-19 to wider society and the healthcare services has been prioritised as the singular most important issue during 2020, however it remains to be seen if other risks (i.e. risks to mental health, isolation, surveillance) will be similarly prioritised alongside COVID-19 as we move beyond lockdown. However, this notion requires further research.

Care and older people in a digital-by-default future

The use of these technologies at home can have multiple benefits such as social connections, safety, and enhanced capabilities (Wilson, Hargreaves and Hauxwell-Baldwin, 2017). However, if they continue to be promoted as the societal norm after the end of the COVID-19 pandemic, then the vision of the use of these technologies for personal empowerment and wellbeing (Lê, Nguyen and Barnett, 2012; Majumder *et al.*, 2017) may disappear completely. My key participants spoke at length about the importance they placed on maintaining routines such as walking their dogs and swimming in the sea, and so if they are denied these opportunities through the lockdown and enforced isolation, there is a potential for them to lose confidence in their abilities to do these activities and hence they are likely to experience further physical and social isolation (Imrie, 2004).

As such, the dominant narrative for healthcare smart home development needs to be re-considered and re-imagined to better reflect the lived experiences of older people, particularly in the context of COVID-19 experiences that have played out over the last months. Where once the use of smart (healthcare) technologies at home was just one in a long list of care at home options, the potential for digital-by-default systems due to observed cost- and efficiency- savings may emerge from smart (healthcare) technology use during the pandemic. If this occurs, then the experiences and feelings of older people may continue to be somewhat ignored by those in positions of power.

Conclusions

Now, we are in the middle of Summer 2020, months after the lockdown began, we are cautiously dipping our toe in the water of the so-called 'new normal'. In the UK, officially 46,000 have died from COVID-19 (although many suspect the real figures to be much greater). Globally deaths sit at almost 650,000, which again may be a modest calculation. I, like many others, worry that this is not the end, and more of a temporary pause, the intermission in a play, with the second act much more horrifying than the first. Yet for many, there is still no intermission, and the inequalities are ever more apparent. Rises in infections are now being recorded in care homes, and many of these care home residents still cannot have visits from their friends and families. Many more people from lower-class and non-white backgrounds have died through their work on buses, in supermarkets and care homes. Recently, calls have been made to look into the UK government's response to the pandemic in terms of the timing of measures and how *they have protected (or more likely failed in their attempts to protect) more vulnerable members of society including individuals with disabilities and from certain ethnic backgrounds.*

In this paper, I have highlighted some of the inequalities that older people, and one example of intersectionality, experience in everyday life concerning social, geographical and economic access to varying forms of care at home. These are inequalities that have, in many cases, been emphasised through the COVID-19 lockdown. This links to other issues of social inequalities and intersectionalities which have been further highlighted and perpetuated in the pandemic such as the questionable low-skill and low-pay of key workers including social care workers (Rose-Redwood *et al.*, 2020), who are often from working- or lower-class backgrounds. Additionally, when healthcare smart homes were previously promoted as an innovative solution to the crisis of ageing, (enabling wellbeing, choice and autonomy) within the lockdown these benefits have been lost lost as the risks to life became too great.

However, I worry that the inequalities concerning the varying forms of access to care may be heightened in a post-COVID world if such technologies are imposed on older people, by society and their wider caring networks, as a less-risky option than care home living or frequent in-person visits to the hospital or their GP. For instance, as another recession looks likely in much of the world, including the UK, the impacts of varying levels of financial access to either in-person or digital health and social care may become increasingly apparent. Simultaneously, the pandemic has re-classified all older people over 70 as members of the fourth age, rather than a diverse group of individuals. As such, remote smart healthcare technologies, including community fall alarms and remote CCTV cameras, will likely be targeted and advertised more towards the wider caring networks under the auspices of 'ensuring peace of mind' and safety of their loved ones (Katz and Marshall, 2018; Peine and Neven, 2020) rather than towards the older people themselves, many of whom may be very capable of, and appreciate, maintaining control of their own healthcare needs. Although such technological installations may be encouraged by the wider caring networks (e.g., family members) with the best of intentions, there will always be risks, if not from COVID, from other sources, and the benefits of users having enough choice and autonomy in their care at home may far outweigh the risks of COVID-19.

Furthermore, older people's identities are more than simply the risks they pose on themselves and society, as well as more than their desires to age-at-home (Aceros, Pols and Domènech, 2015; Katz and Marshall, 2018). Ultimately, the 'crisis of ageing' (Neven and Peine, 2017) cannot be innovatively, and solely, solved by smart healthcare technology because it is a social, and somewhat socially constructed, rather than technological, issue. The impacts of the crises of ageing and coronavirus have been worsened in many ways by the structural inequalities (Adams and Niezen, 2016; Katz and Marshall, 2018) and intersectionalities that exist in our current society. The media and (often) government-level stigmatisation and pathologization of older people, people with disabilities and individuals of varying races and genders have enabled societal responses which aim to 'solve' global ageing and the COVID-19 pandemic through further potential stigma and stereotyping, such as through digital-by-default healthcare. These solutions do little to consider these intersections of society such as older people as individuals with their own fears, desires and needs. The very structures that created these inequalities and intersectionalities need to be rebuilt and re-centred with a focus on diverse individuals as autonomous beings. These individuals are often labelled as a collective group e.g. an older individual, a person with disabilities, and perceived as a wider risk and burden on society, but they are so much more than simply their label . If these structures can be rebuilt and re-centred, through better infrastructure, education and support, then increasing numbers of older people may be able to, and choose to, embrace a future that includes living with healthcare smart homes and their associated devices.

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References

Aceros, J. C., Pols, J. and Domènech, M. (2015) 'Where is grandma? Home telecare, good aging and the domestication of later life', *Technological Forecasting and Social Change*, 93, pp. 102–111. doi: 10.1016/j.techfore.2014.01.016.

Adams, S. and Niezen, M. (2016) 'Digital "solutions" to unhealthy lifestyle "problems": the construction of social and personal risks in the development of eCoaches', *Health, Risk and Society*, 17(7–8), pp. 530–546. doi: 10.1080/13698575.2015.1136409.

AGE UK (2017) *Older carers left to fill the gap as our social care system crumbles | News | Age UK*. Available at: https://www.ageuk.org.uk/latest-news/articles/2017/december/older-carers-fill-the-gap/ (Accessed: 29 July 2020).

Ahmad, A. *et al.* (2020) 'What does it mean to be made vulnerable in the era of COVID-19?', *The Lancet*, pp. 1481–1482. doi: 10.1016/S0140-6736(20)30979-X.

Balta-Ozkan, N., Davidson, R., Bicket, M, Whitmarash, L. (2013) ‘Social barriers to the adoption of smart homes’, *Energy Policy*, 63, pp. 363–374. doi: 10.1016/j.enpol.2013.08.043.

Balta-Ozkan, N., Boteler, B. and Amerighi, O. (2014) ‘European smart home market development: Public views on technical and economic aspects across the United Kingdom, Germany and Italy’, *Energy Research & Social Science*, 3, pp. 65–77. doi: 10.1016/j.erss.2014.07.007.

BBC (2020a) *Coronavirus: Spanish army finds care home residents ‘dead and abandoned’ - BBC News*. Available at: https://www.bbc.co.uk/news/world-europe-52014023 (Accessed: 29 April 2020).

BBC (2020b) *Coronavirus: Tenth resident dies at Skye care home - BBC News*. Available at: https://www.bbc.co.uk/news/uk-scotland-highlands-islands-52690630 (Accessed: 28 July 2020).

BBC NEWS (2020) ‘Coronavirus: Why disabled people are calling for a Covid-19 inquiry - BBC News’. Available at: https://www.bbc.co.uk/news/uk-53221435 (Accessed: 29 July 2020).

Bennett, J., Rokas, O. and Chen, L. (2017) ‘Healthcare in the Smart Home: A Study of Past, Present and Future’, *Sustainability*, 9(5), p. 840. doi: 10.3390/su9050840.

Bevir, M. (2016) *Governmentality After Neoliberalism*, *Governmentality After Neoliberalism*. Routledge. Available at: https://books.google.com/books?id=p5pirgEACAAJ&pgis=1 (Accessed: 16 May 2019).

Buckingham, H. (2020) ‘Coronavirus: how will the NHS cope? | The Nuffield Trust’. Available at: https://www.nuffieldtrust.org.uk/news-item/coronavirus-how-will-the-nhs-cope (Accessed: 29 April 2020).

Bülow, M. H. and Söderqvist, T. (2014) ‘Successful ageing: A historical overview and critical analysis of a successful concept’, *Journal of Aging Studies*. JAI, 31, pp. 139–149. doi: 10.1016/J.JAGING.2014.08.009.

Burrows, A., Coyle, D. and Gooberman-Hill, R. (2018) ‘Privacy, boundaries and smart homes for health: An ethnographic study’, *Health & Place*, 50, pp. 112–118. doi: 10.1016/J.HEALTHPLACE.2018.01.006.

Bytheway, B. (2005) ‘Age-identities and the celebration of birthdays’, *Ageing and Society*, 25(4), pp. 463–477. doi: 10.1017/S0144686X05003831.

Chapman, T. and Hockey, J. L. (1999) *Ideal homes?: social change and domestic life*. Routledge.

Colic-Peisker, V., Ong, R. and Wood, G. (2015) 'Asset poverty, precarious housing and ontological security in older age: an Australian case study', *International Journal of Housing Policy*, 15(2), pp. 167–186. doi: 10.1080/14616718.2014.984827.

Cristoforetti, A., Gennai, F. and Rodeschini, G. (2011) 'Home sweet home: The emotional construction of places', *Journal of Aging Studies*. JAI, 25(3), pp. 225–232. doi: 10.1016/j.jaging.2011.03.006.

Currie, M., Philip, L. J. and Roberts, A. (2015) 'Attitudes towards the use and acceptance of eHealth technologies: a case study of older adults living with chronic pain and implications for rural healthcare', *BMC Health Services Research* 15. doi: 10.1186/s12913-015-0825-0.

Darby, S. J. (2018) 'Smart technology in the home: time for more clarity', *Building Research & Information*, 46(1), pp. 140–147. doi: 10.1080/09613218.2017.1301707.

Dowds, G., Philip, L, Currie, M., Masthoff, J. (2018) 'A Window to the Outside World. Digital Technology to Stimulate Imaginative Mobility for Housebound Older Adults in Rural Areas', in Curl, A. and Musselwhite, C. (eds) *Geographies of Transport and Ageing*. Cham: Springer International Publishing, pp. 101–130. doi: 10.1007/978-3-319-76360-6_5.

Eaves, L. and Al-Hindi, K. F. (2020) 'Intersectional geographies and COVID-19', *Dialogues in Human Geography*, 10(2), pp. 132–136. doi: 10.1177/2043820620935247.

Ekerdt, D. J., Koss, C. S., Li, A., Munch, A., Lessenich, S., Fung, H. (2017) 'Is longevity a value for older adults?', *Journal of Aging Studies*. JAI, 43, pp. 46–52. doi: 10.1016/J.JAGING.2017.10.002.

Ellis, C., Adams, T. E. and Bochner, A. P. (2011) 'Autoethnography: an overview', *Historical Social Research*, 36(4), pp. 273–290. doi: 10.12759/hsr.36.2011.4.273-290.

Fealy, G., McNamara, M., Treacy, M.P., Lyones, I. (2012) 'Constructing ageing and age identities: A case study of newspaper discourses', *Ageing and Society*, 32(1), pp. 85–102. doi: 10.1017/S0144686X11000092.

Golant, S. M. (2017) 'A theoretical model to explain the smart technology adoption behaviors of elder consumers (Elderadopt)', *Journal of Aging Studies*. JAI, 42, pp. 56–73. doi: 10.1016/J.JAGING.2017.07.003.

Guardian (2020a) ‘Black Americans dying of Covid-19 at three times the rate of white people | Coronavirus outbreak | The Guardian’. Available at: https://www.theguardian.com/world/2020/may/20/black-americans-death-rate-covid-19-coronavirus (Accessed: 29 July 2020).

Guardian (2020b) ‘Low-paid workers more likely to die from Covid-19 than higher earners | Society | The Guardian’. Available at: https://www.theguardian.com/world/2020/may/11/manual-workers-likelier-to-die-from-covid-19-than-professionals (Accessed: 29 July 2020).

Gurney, C. (2020) *Out of harm’s way? Critical remarks on harm and the meaning of home during the 2020 COVID-19 social distnacing measures. UK Collaborative Centre for Housing Evidence.* Available at: https://housingevidence.ac.uk/publications/out-of-harms-way/ (Accessed 15th July 2020).

Hargreaves, T., Wilson, C. and Hauxwell-Baldwin, R. (2018) ‘Learning to live in a smart home’, *Building Research and Information*, 46(1). doi: 10.1080/09613218.2017.1286882.

Hillcoat-Nallétamby, S. and Ogg, J. (2014) ‘Moving beyond “ageing in place”: Older people’s dislikes about their home and neighbourhood environments as a motive for wishing to move’, *Ageing and Society*., 34(10), pp. 1771–1796. doi: 10.1017/S0144686X13000482.

Hine, C. (2019) ‘Strategies for reflexive ethnography in the smart home: Autoethnography of silence and emotion’. *Sociology*, 54(1), pp.22-36. doi: 10.1177/0038038519855325

van Hoof, J., Demiris, G. and Wouters, E. J. M. (2016) *Handbook of smart homes, health care and well-being*, *Handbook of Smart Homes, Health Care and Well-Being*. Springer International Publishing. doi: 10.1007/978-3-319-01583-5.

Hooyman, N. R. and Kiyak, H. A. (2011) *Social gerontology : a multidisciplinary perspective*. Pearson Education: Los Angeles.

Horsfall, D. *et al.* (2017) ‘Home as a place of caring and wellbeing? A qualitative study of informal carers and caring networks lived experiences of providing in-home end-of-life care’, *Health and Place*, 46, pp. 58–64. doi: 10.1016/j.healthplace.2017.04.003.

Iacovone, C. *et al.* (2020) ‘Breaking the distance: Dialogues of care in a time of limited geographies’, *Dialogues in Human Geography*, 10(2), pp. 124–127. doi: 10.1177/2043820620934940.

Imrie, R. (2004) ‘Disability, embodiment and the meaning of the home’, *Housing Studies*, 19(5), pp. 745–763. doi: 10.1080/0267303042000249189.

Katz, S. (2000) ‘Busy Bodies: Activity, aging, and the management of everyday life’, *Journal of Aging Studies*, 14(2), pp. 135–152. doi: 10.1016/S0890-4065(00)80008-0.

Katz, S. and Marshall, B. L. (2018) ‘Tracked and fit: FitBits, brain games, and the quantified aging body’, *Journal of Aging Studies*, 45, pp. 63–68. doi: 10.1016/j.jaging.2018.01.009.

Kim, K., Gollamudi, S. S. and Steinhubl, S. (2017) ‘Digital technology to enable aging in place’, *Experimental Gerontology*, 88, pp. 25–31. doi: 10.1016/J.EXGER.2016.11.013.

Lake, J. (2015) ‘Autoethnography and reflective practice: reconstructing the doctoral thesis experience’, *Reflective Practice*, 16(5), pp. 677–687. doi: 10.1080/14623943.2015.1071247.

Layzell, B., Manning, B. and Benton, S. (2009) ‘The elderly demographic time bomb - Sharing the load with the active ageing: Can eHealth technologies help defuse it?’, *Studies in Health Technology and Informatics*, 146, pp. 166–170. doi: 10.3233/978-1-60750-024-7-166.

Lê, Q., Nguyen, H. B. and Barnett, T. (2012) ‘Smart Homes for Older People: Positive Aging in a Digital World’, *Future Internet*, 4(4), pp. 607–617. doi: 10.3390/fi4020607.

Lee, B., Kwon, O., Lee, I., Kim, J. (2017) ‘Companionship with smart home devices: The impact of social connectedness and interaction types on perceived social support and companionship in smart homes’, *Computers in Human Behavior*, 75, pp. 922–934. doi: 10.1016/j.chb.2017.06.031.

Leibing, A., Guberman, N. and Wiles, J. (2016) ‘Liminal homes: Older people, loss of capacities, and the present future of living spaces’, *Journal of Aging Studies*. JAI, 37, pp. 10–19. doi: 10.1016/J.JAGING.2015.12.002.

Liu, L., Stroulia, E., Nikolaidas, I., Miguel-Cruz, A., Rios Rincon, A. (2016) ‘Smart homes and home health monitoring technologies for older adults: A systematic review.’, *International Journal of Medical Informatics*, 91, pp. 44–59. doi: 10.1016/j.ijmedinf.2016.04.007.

Maalsen, S. and Dowling, R. (2020) ‘Covid-19 and the accelerating smart home’, *Big Data and Society*, July -September, pp. 1-5. doi: 10.1177/2053951720938073.

Majumder, S., Aghayi, E., Noferesti, M, Memarzadeh-Tehran, H., Modal, T., Pang, Z., Jamal Deen, M. (2017) ‘Smart homes for elderly healthcare—Recent advances and research challenges’, *Sensors (Switzerland)*. MDPI AG. doi: 10.3390/s17112496.

Manzo, L. K. C. and Minello, A. (2020) ‘Mothers, childcare duties, and remote working under COVID-19 lockdown in Italy: Cultivating communities of care’, *Dialogues in Human Geography*, 10(2), pp. 120–123. doi: 10.1177/2043820620934268.

Marikyan, D., Papagiannidis, S. and Alamanos, E. (2019) ‘A systematic review of the smart home literature: A user perspective’, *Technological Forecasting and Social Change*, 138, pp. 139–154. doi: 10.1016/J.TECHFORE.2018.08.015.

Mason, R. (2020) ‘NHS and care workers may be asked to reuse PPE, No 10 confirms | Coronavirus outbreak | The Guardian’. Available at: https://www.theguardian.com/world/2020/apr/15/ppe-could-be-reused-as-last-resort-says-leaked-phe-document (Accessed: 29 April 2020).

Mitchell, S. E., Weigel, G.M., Stewart, S.K.A., Mako, M., Loughnane, J.F. 2017) ‘Experiences and Perspectives on Advance Care Planning among Individuals Living with Serious Physical Disabilities’, *Journal of Palliative Medicine*, 20(2), pp. 127–133. doi: 10.1089/jpm.2016.0168.

Neven, L. and Peine, A. (2017) ‘From Triple Win to Triple Sin: How a Problematic Future Discourse is Shaping the Way People Age with Technology’, *Societies*, 7(3), p. 26. doi: 10.3390/soc7030026.

Park, S. (2017) ‘Digital inequalities in rural Australia: A double jeopardy of remoteness and social exclusion’, *Journal of Rural Studies*, 54, pp. 399–407. doi: 10.1016/j.jrurstud.2015.12.018.

Peine, A. and Neven, L. (2020) ‘The co-constitution of ageing and technology-a model and agenda’, *Ageing and Society*, pp. 1–22. doi: 10.1017/S0144686X20000641.

Philip, L., Cottrill, C., Farrington, J., Williams, F., Ashmore, F. (2017) ‘The digital divide: Patterns, policy and scenarios for connecting the “final few” in rural communities across Great Britain’, *Journal of Rural Studies*, 54, pp. 386–398. doi: 10.1016/J.JRURSTUD.2016.12.002.

Philip, L. and Williams, F. (2019) *Healthy Ageing in Smart Villages? Observations from the Field in: European Countryside Volume 11 Issue 4 (2019)*. Available at: https://content.sciendo.com/view/journals/euco/11/4/article-p616.xml (Accessed: 29 April 2020).

Powell, J., Newhouse, N., Boylan, A-M., Williams, V. (2016) ‘Digital health citizens and the future of the NHS’, *Digital Health*, 2, p. 205520761667203. doi: 10.1177/2055207616672033.

Power, A. and Hall, E. (2018) ‘Placing care in times of austerity’, *Social & Cultural Geography*, 19(3), pp. 303–313. doi: 10.1080/14649365.2017.1327612.

Rogers, D. and Power, E. (2020) ‘Housing policy and the COVID-19 pandemic: the importance of housing research during this health emergency’, *International Journal of Housing Policy,* 20(2), pp. 177-183. doi: 10.1080/19491247.2020.1756599.

Rose-Redwood, R., Kitchin, r., Apostolopoulou, E., Rickards, L., Blackman, T., Crampton, J., Rossi, U., Buckley, M. (2020) ‘Geographies of the COVID-19 pandemic’, *Dialogues in Human Geography*, 10(2), pp. 97–106. doi: 10.1177/2043820620936050.

Sakellariou, D. and Rotarou, E. S. (2017) ‘The effects of neoliberal policies on access to healthcare for people with disabilities.’, *International journal for equity in health*, 16(1), p. 199. doi: 10.1186/s12939-017-0699-3.

Scally, G. (2020) ‘England’s ravaged public health system just can’t cope with the coronavirus | Gabriel Scally | Opinion | The Guardian’. Available at: https://www.theguardian.com/commentisfree/2020/mar/30/england-public-health-coronavirus-cuts-regional (Accessed: 29 April 2020).

Sixsmith, A. and Sixsmith, J. (2008) ‘Ageing in Place in the United Kingdom’, *Ageing International*, 32(3), pp. 219–235. doi: 10.1007/s12126-008-9019-y.

Sparks, C. (2013) ‘What is the “digital divide” and why is it important?’, *Javnost*, 20(2), pp. 27–46. doi: 10.1080/13183222.2013.11009113.

Standring, A. and Davies, J. (2020) ‘From crisis to catastrophe: The death and viral legacies of austere neoliberalism in Europe?’, *Dialogues in Human Geography*, 10(2), pp. 146–149. doi: 10.1177/2043820620934270.

Visser, R. C. (2019) ‘Going Beyond the Dwelling Challenging the Meaning of Home at the End of Life’, *Visser | Anthropology & Aging*, 40(1), pp. 5–10. doi: 10.5195/aa.2019.215.

Weicht, B. (2013) ‘The making of “the elderly”: Constructing the subject of care’, *Journal of Aging Studies*. JAI, 27(2), pp. 188–197. doi: 10.1016/j.jaging.2013.03.001.

Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., Allen, R.E.S. (2012) ‘The meaning of “aging in place” to older people’, *Gerontologist*, 52(3), pp. 357–366. doi: 10.1093/geront/gnr098.

Williams, F., Philip, L., Farrington, J., Fairhurst, G. (2016) ‘“Digital by Default” and the “hard to reach”: Exploring solutions to digital exclusion in remote rural areas’, *Local Economy: The Journal of the Local Economy Policy Unit*., 31(7), pp. 757–777. doi: 10.1177/0269094216670938.

Wilson, C., Hargreaves, T. and Hauxwell-Baldwin, R. (2015) ‘Smart homes and their users: a systematic analysis and key challenges’, *Personal and Ubiquitous Computing*, 19(2), pp. 463–476. doi: 10.1007/s00779-014-0813-0.

Wilson, C., Hargreaves, T. and Hauxwell-Baldwin, R. (2017) ‘Benefits and risks of smart home technologies’, *Energy Policy*, 103, pp. 72–83. doi: 10.1016/j.enpol.2016.12.047.

World Health Organisation (2020) *Coronavirus (COVID-19) events as they happen*. Available at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen (Accessed: 29 April 2020).