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# Evaluation of the 'Connecting Residents in Scotland's Care Homes' Programme.

## Executive Summary.

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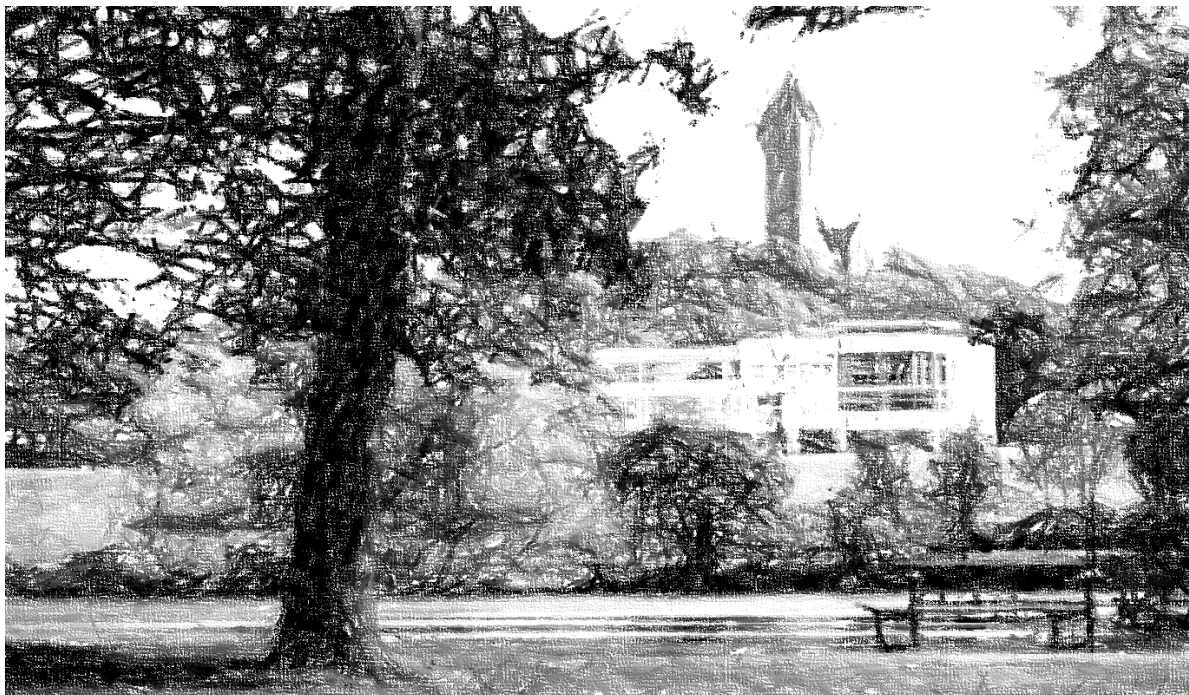
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## Overview

This report details the findings from the 'Connecting Residents in Scotland's Care Homes' (hereafter CRSCH) programme evaluation. The evaluation was commissioned by the Scottish Government Technology Enabled Care programme in conjunction with the Digital Health and Care Innovation Centre (DHI). The project sought to evaluate the programme from the perspectives of all stakeholders, including residents, care staff, managers, family and friends of residents, and policymakers. The evaluation goal was to identify how far the programme is meeting its objectives, the issues influencing its effectiveness and the individual and organisational factors that will influence its continued scale up and sustainability over the longer term.

Part of the wider 'Connecting Scotland' programme, the CRSCH programme was launched in November 2020 by the Scottish Government with the goal of equipping all care homes within Scotland with digital devices, as well as the necessary training for staff.

## Aims and objectives

Our evaluation reports on four key aims, linked to the evaluation questions set out and agreed with DHI at the beginning of the project.

1. Identify how, and to what degree, the introduction of the CRSCH programme has made a difference to the lives and organisational care practices of Care Homes and Care Home residents. We focus on the following outcomes:
  - a. improving access to digital solutions and their everyday usage
  - b. reducing social isolation, maintaining social connectedness, and promoting independence
  - c. enabling access to advice, information, services, and support
  - d. enhancing digital skills and confidence among Care Home residents and staff.
2. Identify the individual and organisational factors contributing to the successful (or not) introduction, adoption and use of digital solutions to improve health and wellbeing, and factors influencing any subsequent abandonment of these digital solutions.
3. Identify, the inputs, processes, and outcomes which account for the success (or not) of the intervention, including costs, strengths, weaknesses, opportunities and priorities.
4. Make the case for whether the CRSCH should continue, based on opportunities and barriers to its sustainability and adoption at scale.

## Methods

The evaluation was conducted between December 2021 and July 2022 and was conducted by a research team from the Faculty of Social Sciences and the Stirling Management School at the University of Stirling. We adopted a mixed methods approach, employing the following data collection processes:

1. A rapid review of research literature about the use and impact of tablet computers, smart phones or other similar videoconferencing technology in care homes to reduce social isolation and loneliness.
2. A secondary analysis of data on care homes in Scotland and their engagement with the CRSCH.
3. Online individual and small group interviews with a purposive sample of 26 staff members from 22 care homes across Scotland, which had engaged with the CRSCH.
4. An online workshop utilising a visual, online tool to engage with wider stakeholders within policy and practice in Scotland.

5. 'Deep-dive' workshops in four care homes across Scotland, which included engagement with 5 staff members (2 activities coordinators, 1 lead wellbeing coordinator, 1 manager and 1 lead care practitioner) and 18 care home residents.

Data were analysed using the NASSS (Non-adoption, Abandonment, Scale-up, Spread and Sustainability) framework (Greenhalgh et al. 2017) and combined across the different datasets to develop integrated findings to meet the goals of the evaluation. The NASSS framework considers seven aspects of technology implementation and sustainability: condition, technology, value proposition, adopters, organisations, the wider system, and embedding and adaptation over time.

## Findings

At the beginning of the programme, 75% of the 1325 registered care homes in Scotland (correct as September 2021) had been supplied with at least one iPad, and 115 care homes (8.2%) had been supplied with multiple iPads. Many of these homes were also supplied with a MiFi to support wireless access to the internet via the mobile phone network, where a hard-line internet connection was not available.

Findings from across the different datasets are presented within the NASSS analytical framework.

### Condition or illness

Our findings, across different datasets, demonstrated that care home residents and staff have particular support needs and face specific challenges with accessing and using technology, but that technology use is popular among residents when provided with useable technology, alongside the right training, information, and support. The COVID-19 pandemic provided a unique situation that motivated care home organisations and staff to start using technology more frequently to support residents to stay in touch with friends and family.

Secondary analysis of Scottish data found that most of the care homes fully engaging with CRSCH and receiving additional devices, were caring for older people (94.80%). The main areas of care for these organisations were older people with dementia and older people with frailty, however, care homes for older people with frailty received more additional devices, suggesting that the technology is popular for people with this condition.

Interview data reflected on the negative impact of the pandemic and associated restrictions on the wellbeing of care home residents. Morale and mood were low amongst residents and staff. Participants therefore revealed a growing need for solutions, which would enable residents to connect with people outside the care home, and a relief when the CRSCH programme was launched.

### Technology

The literature review confirmed the wide use of tablet computers and the broad acceptability of this technology, due to its ease of use. Some specialist interfaces were evaluated in the literature, suggesting their potential to further support engagement by older people. The COVID-19 pandemic was a clear stimulus for care homes adopting technology to support residents to connect with family and friends during lockdowns and other restrictions. Cost was a crucial factor in whether technology was available within care homes and the type of technology adopted. Aspects of the technology, which could act as barriers to use, included the physical attributes of the technology, and the quality, availability, and cost of Internet connections.

Secondary analysis of CRSCH data revealed that care homes without a technical infrastructure (e.g., limited Wi-Fi, lower number of users on the Wi-Fi, limited resident access to Wi-Fi and no previous

equipment used by residents) were likely to receive fewer iPads. The CRSCH project was mostly utilised by care homes that already had Wi-Fi, provided residents with access to Wi-Fi and owned previous devices for residents to use. Interview data suggested that most care homes participating in the programme were Wi-Fi enabled but there were connection issues, especially when several video calls were taking place at the same time. Homes with reliable Wi-Fi were able to benefit more from the programme.

The interviews with care home staff demonstrated that iPads were an appropriate choice of technology for the care homes and that they worked for the purpose of connecting residents with family during the pandemic. They are familiar and intuitive to use, although residents were typically accompanied by a care staff member when using them. Interestingly, the introduction of the iPads as part of the CRSCH often stimulated further use of other kinds of technology such as interactive screens and Amazon Fire sticks. Several care homes had already introduced tablets as well as other types of technology, such as Virtual Reality headsets, prior to the CRSCH, which indicated that each care home was at a different stage of adopting technology and could be facing unique needs for digital solutions. Besides facilitating videocalls with family and friends, the iPads were used in various activities, such as listening to music, taking photographs, watching videos, reminiscence, solving puzzles, crosswords, sudoku, playing games, singing, and following online fitness classes. A range of apps and platforms were used on the iPads including Skype, FaceTime, Zoom, MS Teams, Messenger, Safari, YouTube, picture taking and video recording apps, as well as apps with puzzles, quizzes, games, and sensory activities

Staff used the tablets for their own purposes such as note taking, maintaining folders for each resident, training via videoconferencing, online meetings and for care planning through specific apps. This use case developed over time as staff became familiar with the technology and its potential. In rare cases this use took precedence over use with residents as social distancing restrictions eased and the need for video calls declined. The tablets were provided to care homes in a timely way through the CRSCH project, but some noted that there was a high demand for iPads in their homes and they had to limit residents' usage time.

### Value proposition

The CRSCH aimed to have a positive impact for residents and staff of care homes, as well as their friends and family. Thus, the evaluation explored the value of the CRSCH project for these distinct groups, alongside the impact on wider policy and practice.

The literature demonstrated positive views on the use and impact of tablet computers in terms of connecting people and engaging residents in different activities. However, the impact of using tablets on specific outcomes for residents, such as loneliness and depression, were less clear with variable results across different studies. Most studies were short term and as such little is known about longer term impacts.

The qualitative data analysis shows that the tablets provided as part of the CRSCH project were used to support the social connectedness of residents and that this provided valued and positive impact for residents, their family and friends, and care home staff. Firstly, videocalls helped residents maintain social connectedness with their friends and relatives, primarily during lockdown and self-isolation periods, when in-person visits were not possible. In addition, the diverse activities in which they could engage offered enjoyment, improved mood, increased physical and cognitive activity, and often improved socialising within the care homes. Tablets were also used to support engagement with and access to health services. Family and friends enjoyed the benefit of being able to see the residents and maintain contact with them, when visits were not possible due to the lockdown, and later due to other

reasons. The continued communication was reportedly reassuring for relatives, as they could see if the residents were keeping well in terms of their health and wellbeing.

A positive impact on staff members was reported, as they were presented with added options to engage with residents. Further, their work became more satisfying, as they saw improvements in their residents' interactions with family and engagement with activities.

### Adopters

The literature review demonstrated that for many care home residents, the staff provided an important supporting role in enabling people to access and use tablets, and that training for staff was a crucial element in technology adoption. Staff attitudes towards technology impacted its adoption. This added to staff workloads as well as leading to changing staff routines and practices. High turnover in care home staff impacted on the implementation and use of technology, for example, when specially trained staff members leave. For care home residents, barriers to adoption included individual views and experiences, physical, cognitive and sensory attributes and abilities, lack of digital literacy, and lack of support from others including staff and family members.

Secondary data analysis revealed several characteristics of care homes relating to their engagement with CRSCH. Care homes that did not engage with the CRSCH project were in more deprived areas whilst care homes that initially engaged and received iPads were in less deprived areas. Out of the care homes that did initially engage, care homes in higher deprivation areas engaged fully with the project by ordering additional iPads. Furthermore, care homes that received iPads were more likely to have a higher number of registered places for residents, a larger number of staff, a lower staff-to-resident ratio, and lower evaluation of staff quality. If staff members attended training, the care homes were more likely to engage fully with the technology and apply for additional devices.

Data from staff interviews illustrated how staff in the care homes quickly embedded the use of tablets into their daily routines to facilitate their use. To support social connectedness using the iPads, most homes adopted a scheduling approach to ensure that residents and family/friends were available at the same time, and to fit into busy routines of the care home staff. Family and friends did not get directly involved in supporting technology use but were involved in scheduling and taking part in video calls.

Only a few care homes reported a named digital champion who had received specific training. In other homes, staff turnover meant the digital champion had moved on and in others there were more informal arrangements regarding who supported residents to use the technology. This may be due to the interest and knowledge of a, or several, members of staff. For example, wellbeing and activity coordinators, where present, often took on responsibility for supporting the use of the iPads. As well as supporting direct use of the iPads, staff also undertook important work such as ensuring tablets were charged, adapting technology, and checking Wi-Fi connections. This could represent significant extra work for the staff who engaged most with the project.

Residents were generally enthusiastic to use the tablets but there was some initial, and less frequently ongoing trepidation due to the unfamiliarity of the devices. However, engagement was encouraged by using the tablets to support activities that were meaningful to these residents. Sensory impairments also presented barriers for engagement and cognitive impairment limited engagement due to shortened attention spans, problems identifying people in the screen, and difficulties remembering how to use the devices. As a result, residents relied heavily on staff support to use the iPads and few were able to utilise the technology without staff input.

## Organisation(s)

The literature suggested that organisations prepared to invest in technology use through activities such as staff training, development of ‘champion’ programmes, education for residents, and provision of decent quality Wi-Fi, were more likely to be successful in its adoption.

Secondary data from CRSCH indicated that care homes who applied for iPads and additional iPads were more likely to be privately owned care homes with a higher number of beds. Interestingly, they were also more likely to be graded lower on the recent Care Inspectorate (February 2022) for care, support, and wellbeing, and setting and environment. Care homes receiving excellent evaluations (5&6) were less likely to apply for iPads.

Workplace cultures were important in supporting adoption and use of the technology. Interview data suggested that where managers were enthusiastic, they could play a key role providing oversight and support for the programme and in motivating staff. Team working between managers and several types of staff in the care home was important to support the use of iPads. In contrast, in homes where use fell on one or two staff members in specific roles, there was a risk that technologies would be abandoned, for example if that staff member left employment. Cultural shifts were reported in some care homes, and staff noted how they had become more confident in using the technology and the devices had become embedded in everyday practice.

## Wider system

Secondary analysis of CRSCH data found care homes that engaged the most were in the central belt and around the main cities of Glasgow, Edinburgh, Dundee, Aberdeen, and Inverness. Areas where care homes did not engage as much included the borders, the West of Scotland (e.g. Fort William and Oban), the Highlands (e.g. Thurso and Wick) and the islands (e.g. Skye and the Shetland Islands). No additional iPads were received by care homes on islands and very few in the borders, despite initial interest from these organisations. This suggests a lower engagement rate in rural areas.

Care homes with resident access to Wi-Fi were predominantly in the central belt and around cities such as Inverness, Aberdeen, Dundee, Edinburgh, and Glasgow. There were also areas in Scotland where there was no resident access to Wi-Fi and the MiFi devices were provided to rectify this. These areas included the Shetland Islands, the Isle of Skye, areas in the Highlands (e.g. Talmine), rural areas (e.g. North-East), and areas in the borders (e.g. Hawick).

Findings from the interview data suggested that care home managers found out about the CRSCH programme through direct emails to their care home, which then cascaded information to care home staff. The provision of the iPads came at a crucial time for care homes during the pandemic lockdowns and was very much appreciated. However, a gap was identified in the provision of information about training to support the programme, with some care homes having little knowledge or awareness that this was available. Further, staff had limited time to attend training or maintain relationships with the wider programme.

The CRSCH objectives were in line with those of ‘Connecting Scotland,’ with DHI’s strategy and ambitions, and with the Scottish Government’s broader commitment to digital inclusion, widening access to digital care, and mitigating the impact of the pandemic. Data from the stakeholder workshop suggested that these objectives were met by enhancing social connectedness and promoting digital inclusion for care home residents, and by engaging care home staff in digital opportunities. Our data from across the different datasets supports this assertion and recognises communication challenges between care homes and the wider policy and practice context.

### Embedding and adaptation over time

There was little evidence in the literature that sufficient thought had been given to the ongoing use of technology and the associated issues (e.g. damage to devices after repeated use). Most studies were time limited interventions and so little is known about longer term implementation.

Qualitative data from the care homes suggested that the iPads were provided at just the right time to support social connectedness during the pandemic. As the situation has changed and developed over time, the use of the iPads has changed, with less focus on video calls and more on using the tablets for a range of other activities. Most homes are continuing to use the iPads, and many have embedded their use into daily practices. Staff predicted that they would continue to use the iPads in the future and felt that they were still learning about their use and potential. A small number of care homes had stopped the use of the iPads, either temporarily due to ongoing changes in staff or management, or permanently due to a reduced perceived value after the lockdown period.

Interviews with staff supported the need for training and for training to move beyond a simple introduction to using technology. Staff wanted creative ideas on how to use the tablets with residents and an opportunity to share best practice with other care homes. In the wider stakeholder workshop the issue of cyber security was raised and may be a pertinent issue for further future training, as this issue was not raised by staff.

There is a need to find mechanisms to reduce the reliance in care homes on a small number of staff who act as digital champions. High staff turnover means this resource is often lost and difficult to replace.

## Conclusions

The CRSCH programme had a significant and positive impact on the lives of care homes residents during the pandemic, promoting social connectedness and providing opportunities for activity and entertainment. Benefits were also felt by staff who saw the positive impact for residents and gained new knowledge and skills that were helpful in their everyday work in the care homes. The impact of the programme is currently being sustained as most of the care homes that engaged at the start are still using the iPads, although the way that iPads are being used is changing and adapting as circumstances change. The programme also appears to have stimulated or become part of an ongoing wider adoption of digital technology, with many care homes using a wider range of devices.

## Recommendations

1. **Recognise the wider use case for the CRSCH programme.** The evidence suggests that iPads and similar technologies can augment and increase the activities and opportunities for social interaction of residents. Further, they can be integrated into wider work within the care homes, including electronic care and medication.
2. **CRSCH can adopt a more personalised, flexible, and person-centred approach to technology.** Rather than supplying a single technology at scale, any ongoing version of the CRSCH programme should evolve to support individual care homes to identify, source and use a wider range of technologies. Allowing care homes some degree of choice regarding devices, would enable them to find technology that works for both staff and residents.

3. **Create a community of practice to support and sustain communication and knowledge exchange around the programme.** A community can be facilitated by activating existing networks, as well as by improving communication with and between care homes, with an emphasis on those that did not engage with the programme. The introduction of new roles such as ‘Care Technologist’ can be considered to support the technological development of care homes.
4. **Identify, support and develop the role of Activity/Wellbeing coordinators.** Activities and wellbeing co-ordinators are typically the staff members who lead responsibility in the adoption of iPads and are crucial to their successful use. Care homes that do not have staff in these roles should be encouraged to establish them, incorporate the use of technology into the job descriptions, ensure protected time and adequate resources, and support the roles with training made available through continuing professional development.
5. **Develop training in person-centred adoption of technology across care home staff.** Apart from wellbeing and activities coordinators, training should be provided to all staff members, and it should focus on two areas 1) the fundamental aspects of using technology, to ensure the inclusion of staff members with varying levels of digital literacy 2) training in creative and person-centred approaches to technology.
6. **Understand the specific technology needs of care homes in deprived areas.** Greater emphasis should be placed on understanding the technology needs of care homes in deprived areas, as they tended to be less engaged in the programme. It is recommended that greater communication channels and methods of outreach are established, with an emphasis on deprived areas.