NIHR | National Institute for Health and Care Research

Journals Library

Check for updates

Health and Social Care Delivery Research

Volume 14 • Issue 16 • May 2026

ISSN 2755-0079

A rapid evaluation of the implementation of Digital Social Care Records in England

Juliette Malley, Joanne Westwood, Martha Snow, Nicola Farrelly, Nicole Steils, Catherine Henderson and Cath Larkins

DOI 10.3310/GJJW2821

NIHR | National Institute for Health and Care Research

Health and Social Care Delivery Research

Check for updates

Extended Research Article

A rapid evaluation of the implementation of Digital Social Care Records in England

Juliette Malley,[1,2*] Joanne Westwood,[3] Martha Snow,[1] Nicola Farrelly,[3] Nicole Steils,[2] Catherine Henderson[1] and Cath Larkins[3]

[1]London School of Economics and Political Science, London, UK
[2]King's College London, London, UK
[3]University of Central Lancashire, Preston, UK

[*]**Corresponding author** juliette.malley@kcl.ac.uk

Disclaimer: This report contains transcripts of interviews conducted in the course of the research, or similar, and contains language which may offend some readers.

Published May 2026
DOI: 10.3310/GJJW2821

This report should be referenced as follows:

Malley J, Westwood J, Snow M, Farrelly N, Steils N, Henderson C, Larkins C. A rapid evaluation of the implementation of Digital Social Care Records in England. *Health Soc Care Deliv Res* 2026;**14**(16). https://doi.org/10.3310/GJJW2821

Health and Social Care Delivery Research

ISSN 2755-0079 (Online)

A list of Journals Library editors can be found on the NIHR Journals Library website

Health and Social Care Delivery Research (HSDR) was launched in 2013 and is indexed by Europe PMC, DOAJ, INAHTA, Ulrichsweb™ (ProQuest LLC, Ann Arbor, MI, USA), NCBI Bookshelf, Scopus and MEDLINE.

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nihr.ac.uk

This journal was previously published as *Health Services and Delivery Research* (Volumes 1–9); ISSN 2050-4349 (print), ISSN 2050-4357 (online)

The full HSDR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hsdr.

Criteria for inclusion in the *Health and Social Care Delivery Research* journal

Manuscripts are published in *Health and Social Care Delivery Research* (HSDR) if (1) they have resulted from work for the HSDR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HSDR programme

The HSDR programme funds research to produce evidence to impact on the quality, accessibility and organisation of health and social care services. This includes evaluations of how the NHS and social care might improve delivery of services.

For more information about the HSDR programme please visit the website at https://www.nihr.ac.uk/explore-nihr/funding-programmes/health-and-social-care-delivery-research.htm

This article

The research reported here is the product of an HSDR Evidence Synthesis Centre, contracted to provide rapid evidence syntheses on issues of relevance to the health service, and to inform future HSDR calls for new research around identified gaps in evidence. Other reviews by the Evidence Synthesis Centres are also available in the HSDR journal.

The research reported in this issue of the journal was funded by the HSDR programme or one of its preceding programmes as award number NIHR163639. The contractual start date was in October 2023. The draft manuscript began editorial review in May 2025 and was accepted for publication in September 2025. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HSDR editors and production house have tried to ensure the accuracy of the authors' manuscript and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this article.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Newgen Digitalworks Pvt Ltd, Chennai, India (www.newgen.co).

Abstract

Background: The English Government introduced a target for 80% of Care Quality Commission registered adult social care providers to be using electronic care planning solutions by March 2024 (extended to March 2025) and made available funding to support the transition from paper to digital social care records.

Objective: The study aimed to generate timely evidence to support care providers to implement digital social care records and maximise the benefit from their introduction.

Design and methods: A co-created rapid evaluation, involving two data collection phases and feedback to study sites. We interviewed 30 senior leaders, 30 care staff, and 23 people who draw on care services and their relatives from 30 care providers (19 care homes, 11 home care agencies) in 4 sites across England and senior leaders of 3 digital social care record suppliers to understand experiences of adoption and implementation, and financial and economic implications.

Results: Policy attention and availability of funding have driven adoption of digital social care records, saving time and delivering other benefits, although experiences varied and there was evidence of suboptimal choice of digital social care record system, alongside buyer regret and abandonment. Providers were concerned about ongoing affordability in the context of continued austerity.

Implementation is time- and resource-intensive with providers experiencing similar and predictable challenges. Planning, leading, managing and resourcing implementation, including investing in training and involving all users or people affected by digital social care records, were important for mitigating and overcoming challenges. A responsive supplier able to resolve technical problems and reasonable requests for flexibility was also important. Care providers in a franchise or group were at an advantage as they could draw on additional support and the experiences of others.

While some features were not used or a matter of preference, a reliable offline working feature was critical for functionality due to patchy internet access. The ability to easily upload images and conduct simple analysis improved functionality; as did the client/relative portal, although this was rarely used and clients/relatives had limited knowledge of digital social care records and their rights. Systems with greater interoperability maximised the benefit from digital social care records.

Unfamiliarity with technology was a barrier to using digital social care records, but training and gradual implementation allowed time for adaptation and increased acceptance. People with poor eyesight, dexterity or English had difficulty using digital social care records.

We did not find evidence of providers capturing data to assess return on investment from digital social care record introduction.

Limitations: Assessing care providers' capacity to estimate their return on investment was difficult as interviewees often lacked knowledge of the financial aspects of the business.

Conclusions: Where implementation is successful digital social care records, over time, deliver benefits to care providers. However, implementation was too often suboptimal due to poor choice of digital social care record supplier, inadequate planning, management and resourcing of change, an unresponsive supplier and limited accessibility features. Ongoing affordability and continuation with digital social care records are a concern for the future, especially for small providers.

Future work: Research investigating the abandonment process and impact of digital social care record adoption on the structure and stability of the care market would be valuable.

Study registration: Phase one ethical approval: the Health Research Authority (23/HRA/4966, IRAS Project ID: 3347698) and phase two from the NHS Research Ethics Committee (24/LO/0204, IRAS Project ID: 335300).

Funding: This award was funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research programme (NIHR award ref: NIHR163639) as part of the Social Care Rapid Evaluation Team (NIHR153673) and is published in full in *Health and Social Care Delivery Research*; Vol. 14, No. 16. See the NIHR Funding and Awards website for further award information.

Contents

List of tables

List of supplementary material

Report Supplementary Material 1 Interview schedule for care provider senior leader and managers (adopters)

Report Supplementary Material 2 Interview schedule for care provider senior leaders and managers (non-adopters)

Report Supplementary Material 3 Interview schedule for care workers

Report Supplementary Material 4 Interview schedule for people drawing on care and family members

Report Supplementary Material 5 Rapid Research Evaluation and Appraisal Lab Sheet Template for care provider senior leaders and managers (adopters)

Report Supplementary Material 6 Rapid Research Evaluation and Appraisal Lab Sheet Template for care provider senior leaders and managers (non-adopters)

Report Supplementary Material 7 Rapid Research Evaluation and Appraisal Lab Sheet Template for care workers

Report Supplementary Material 8 Rapid Research Evaluation and Appraisal Lab Sheet Template for people drawing on care and family members

Supplementary material can be found on the NIHR Journals Library article page (https://doi.org/10.3310/GJJW2821).

Supplementary material has been provided by the authors to support the article and any files provided at submission will have been seen by peer reviewers, but not extensively reviewed. Any supplementary material provided at a later stage in the process may not have been peer reviewed.

The supplementary materials (which include but are not limited to related publications, patient information leaflets and questionnaires) are provided to support and contextualise the publication. Every effort has been made to obtain the necessary permissions for reproduction, to credit original sources appropriately, and to respect copyright requirements. However, despite our diligence, we acknowledge the possibility of unintentional omissions or errors and we welcome notifications of any concerns regarding copyright or permissions.

List of abbreviations

AI	artificial intelligence
API	application programming interface
ASL	Assured Supplier List
COVID-19	coronavirus disease discovered in 2019
CRN	Clinical Research Network
CQC	Care Quality Commission
DiSC	Digitising Social Care Programme
DSCR	digital social care record
EAN	Evaluation Advisory Network
eMAR	electronic medication administration records
GDPR	General Data Protection Regulations
GP	general practitioner
ICB	integrated care board
ICS	integrated care system
IT	information technology
LA	local authority
PAG	Public Advisory Group
RREAL	Rapid Research Evaluation and Appraisal Lab
SOCRATES	Social Care Rapid Evaluation Team

Plain language summary

The English government wants care businesses to adopt digital records of people's care and made money available to help this happen. In this study, we looked at how care businesses are experiencing going digital. We worked with experts by experience and interviewed digital record suppliers, senior leaders, care staff, people who draw on care and their relatives in four areas of England. We wanted to understand how to help care businesses get the most out of going digital. We found:

- Government funding has been helpful but senior leaders worried about future costs.
- Some organisations found digital records worked well and saved them time, but others had bad experiences. They were thinking about abandoning or had abandoned digital records.
- It took time to move from paper to digital care records and organisations faced many similar problems. Organisations that planned and managed the change better found the problems easier to overcome.
- Choice of digital record system was important, as some had easier to use or more reliable features. Offline working was a key example.
- When digital records worked seamlessly with other technologies and digital systems, organisations said they were most beneficial.
- Some people feared using digital records, but training and slowly introducing features gave them confidence and helped them use the system well.
- People with poor eyesight, dexterity or English had difficulty using digital records.
- People who draw on care and their relatives often did not know about digital records nor their rights.

Where care businesses had managed the process of going digital well, over time, they saw benefits. Too often, it did not go well because care businesses did not choose the right system and did not manage the change well. These problems along with concerns about future affordability mean there is a chance some care businesses will abandon digital records.

Scientific summary

Background

United Kingdom policy-makers have long advocated for the digitalisation of health and social care. Digitisation of care records held by adult social care providers is seen as critical step to increase the amount of information in the system, but the government also argues that digital social care records (DSCRs) will help the system to deliver on its vision for transforming social care. Policy has focused on adult social care providers as digitisation for this group has lagged other areas. As part of the £150M Digitising Social Care (DiSC) Programme, the government provided matched funding to care providers for DSCR adoption and introduced a target to ensure that 80% were using DSCRs by March 2024 (later extended to March 2025). According to official estimates uptake rose from 40% in 2021 to 75% by January 2025, indicating that the government is nearing its target.

Digital social care records, or electronic care plans, enable the recording and sharing of care information digitally, replacing paper record keeping and management. These systems are often designed for specific social care settings (e.g. home care providers, care homes) and types of clients (e.g. children or adults) and feature additional functionalities, such as real-time data sharing, offline access, and integration with other practitioners' systems, enhancing accessibility and efficiency. A searchable database on the Government's *Digital Social Care* website lists the full functionality of the 16 systems that are currently (April 2025) on the Assured Supplier List (ASL). The ASL lists supplier solutions that comply with a minimum set of capabilities and standards.

Although digital records have been used in social care settings for many years, there is limited evidence about the experiences, consequences and economic impacts of DSCR adoption and implementation by care providers. Greenstock's review highlights potential benefits of DSCRs, such as workforce productivity, enhanced care quality, collaboration and financial benefits, but the evidence is inconclusive about the extent to which these benefits are realised. Other studies find a range of organisational and external barriers to implementation and note that where systems are complex and impractical, they do not save time and can hinder rather than enhance care delivery. Stakeholders who participated in the scoping study questioned whether DSCRs yield financial or non-financial returns on investment for care providers.

Research finds that the material properties and functionality of technology are crucial for uptake and use, and that these can be improved through co-design of solutions with end-users. Given the systems on the ASL feature modern interfaces designed collaboratively with the sector, offering mobile/offline options, portals for service users and family members, and interoperability with other technologies and systems, differences between these systems and older examples warrant further exploration. Additionally, stakeholders suggested a need to focus on the impact of digitisation on already marginalised groups of people, raising concerns that DSCRs may further exclude such groups and exacerbate existing problems, for example around the workforce supply and working conditions.

The potential benefits of recently developed systems presented an opportunity for a rapid evaluation of DSCR implementation to inform the digitalisation agenda and enhance attention to the issues of equality, diversity and inclusion and the economic and financial implications of adoption for care providers.

Objectives

Through initial discussions with public advisors, we developed the following research questions

1. Within which contexts is digitisation of social care records happening and why?
2. What are the expectations, experiences and consequences of implementing DSCRs?
3. How do people experience using specific features of DSCRs within care relationships?
4. What are the experiences and consequences of DSCR implementation for people in different social categories?
5. What are social care providers' economic and financial considerations in implementing DSCRs?

Methods and limitations

We conducted a rapid evaluation involving two phases of data collection and feedback to participating sites and stakeholders. The data collection was staged to ensure timely feedback to stakeholders for improving local DSCR implementation. The evaluation was co-created with an Evaluation Advisory Network (EAN) including public experts by experience, care professionals and other stakeholders with relevant learned expertise. In line with principles of co-creation in knowledge generation, EAN members generated ideas, helped design methods and guide their implementation, and contributed to sense-making. Some EAN members also conducted phase two interviews.

We recruited 19 care homes and 11 home care provider organisations from 4 sites (covering 5 integrated care systems) across England. Care providers were recruited via the Digital Lead (or person with responsibility for delivery of the DiSC Fund) working for integrated care boards, in collaboration with local Clinical Research Networks. The first phase engaged senior leaders from 30 care providers in semistructured interviews to examine adoption and non-adoption, perceptions of the expectations and consequences of implementing DSCRs from an organisational perspective, including discussion of the DSCR business case and with attention to equity implications. We also recruited and interviewed senior leaders from three DSCR suppliers to provide an alternative perspective on these themes.

The second phase included 30 care staff and 23 people who draw on care services, and their relatives in semistructured interviews. Interviews focused on their experiences of the implementation process and using specific features of DSCRs within their day-to-day work and care relationships, again considering equity implications. This phase also explored the economic impacts of DSCR adoption by examining providers' expectations and capacity to estimate returns on investment, although this was challenging due to data availability and provider capacity.

To move rapidly from data collection to synthesis of the data, the team used Rapid Research Evaluation and Appraisal Lab (RREAL) Rapid Assessment Procedures sheets. Data from the interviews were recorded in RREAL sheets by themes and subthemes, informed by the research and interview questions and separating adopters from non-adopters, home care agencies from care homes, and data from different types of interviewees to preserve situational insights. We held three collaborative analysis sessions at the end of each research phase, including with peer researchers in phase two. This facilitated triangulation of data across a fairly large team and ensured that the team moved rapidly to a consensus on key findings that could be fed back to the EAN and participating sites. A dialogue event with key stakeholders, including EAN members, enabled us to deepen sense-making and to gather additional insights and reflections.

For analysis of the economic and financial implications of DSCR adoption for care providers, it was not possible to collect additional quantitative data as the senior leaders involved in the study did not have direct access to financial information and very few were able to provide a business case for DSCRs. Analysis primarily used the qualitative data from interviews with senior leaders of care providers and suppliers and followed the methods already outlined. Additionally, data on costs and benefits in the RREAL sheets were coded using a conventional approach to qualitative content analysis to identify categories of costs and benefits. The content of business cases was loosely compared against the HM Treasury Green Book.

Results

Adoption of digital social care records

The adoption of DSCRs has been occurring within the context of sustained policy attention from the English Government. While the perceived benefits of DSCRs influenced decisions to adopt, policy attention and the availability of funding were cited by senior leaders in care providers and suppliers as critical drivers of adoption. Funding was particularly helpful for providers who were eager to adopt but were previously constrained by cost, but some care providers felt pressured into adoption and were misinformed about regulatory expectations. However, resistance to adoption persists, particularly among smaller organisations that worry about affordability, data security, how data would be used by other organisations and data sharing between professionals being impeded. These concerns were also raised by organisations who had decided on balance to adopt.

An important part of the adoption decision is the choice of DSCR supplier, but many senior leaders felt they were too busy and lacked confidence to make a good choice from the large number of suppliers. Alongside evidence of buyer regret and abandonment, we determined that some care providers are making suboptimal choices. Senior leaders wanted more concise guidance, recommendations and peer insights to navigate decision-making effectively.

Implementation of digital social care records and consequences

The implementation process is long and complex, and it tended to be earlier adopters who reported the greatest benefits. Many care providers who had only recently adopted felt that they had not yet seen any benefits; some were experiencing only disbenefits and had abandoned or were considering doing so.

Although experiences of the implementation process varied, all providers encountered similar sets of challenges. The key difficulties included the lengthy and resource-intensive transition, staff resistance due to technological unfamiliarity, and concerns over how mobile devices were perceived in client interactions. Additionally, technical shortcomings, such as clunky interfaces, limited automation and unreliable internet connectivity – particularly in rural settings – posed further obstacles. These findings align with previous research and established implementation frameworks, underscoring the predictable nature of such barriers.

To mitigate these challenges, several strategies were identified as facilitating smoother implementation. Effective strategies included phased introductions to allow gradual adaptation, strong leadership – including DSCR champions – to drive change, and comprehensive training. Additionally, adequately resourcing and planning implementation, and including involving all users or people affected by DSCRs in the process was important. A responsive supplier able to resolve technical problems and reasonable requests for flexibility was particularly critical to avoid care providers losing faith in products.

Providers that were part of a franchise or group benefitted from additional resources, including IT support and project managers, highlighting the advantages of shared expertise.

Experiences of features of digital social care records

Digital social care record systems incorporate a range of features to deliver on their claim that they support person-centred care and save staff time, including icon-driven interfaces, real-time recording and patient-family portals, but there is variability across systems in the availability of many of these features, their usability and technical reliability. Real-time functionality was critical for successful implementation, but due to patchy internet access depended on DSCRs having reliable offline working features. While some DSCRs achieved good functionality, others did not, leading to workarounds that strained care routines.

Icon-based tools were seen as time saving and accessible for those with limited English proficiency, whereas narrative entry tools were often more flexible and allowed for more detailed documentation at the expense of speed. Features like image uploads and data analytics were valued for improving the quality and safety of care delivery, though their usability and availability varied across systems. Interoperability with other technologies and systems of partners' organisations was seen as critical, but only some care providers were utilising these features and systems varied in their capabilities. Equally, the patient-family portals were reported to bring transparency and communication benefits but were rarely in use, and many clients and relatives had low awareness of DSCRs and online data security risks, necessitating stronger communication about DSCRs and data security.

Experiences of digital social care records for people in different social categories

While DSCRs could facilitate more inclusive, person-centred care practices – helping staff cater to preferences tied to gender identity and health conditions – where systems were too standardised and inflexible, they could also make it harder to address specific needs. Digitisation also proved anxiety inducing for individuals unfamiliar with technology who were often older. Comprehensive training and gradual implementation built confidence and allowed time for adaptation, but similar support was seldom offered to clients and families, who advocated for wider access to training. People with specific health conditions (e.g. limited dexterity, poor eyesight) and those with lower proficiency in English had difficulty using DSCRs. Icon-driven systems and predictive text tools showed promise for people with

limited English, but many accessibility features like large text, read-aloud functions, and translation features were not universally available.

Economic and financial implications for care providers

As far as we could gather from the care providers who participated in this study, investment decisions were not based on data about likely costs, benefits and risks to the organisation and the likely impact of the investment on the profitability or sustainability of the business. Care providers often lacked full information about the costs associated with adoption, leading to unpreparedness for the transition to digital records. We found no evidence of the development of comprehensive business cases, nor of systematic analysis of the impact of adoption on business profitability or sustainability.

We gathered evidence about financial and economic implications for care providers, by identifying five categories of costs (hardware, software, infrastructure that is necessary for the functioning of digital devices, training and implementation support, and management and administrative activities) and outlining the impact pathway. We find that benefits of DSCRs, such as improved accessibility, security and the quality of care records, are contingent upon successful implementation, resulting in high-quality, accessible, up-to-date and secure records. We also find that benefits seem to accrue gradually over a long time horizon and become greater with greater interoperability. However, a lack of quantitative data means uncertainty remains over whether investing in DSCRs would, over time, deliver cost savings or contribute to the profitability or sustainability of the organisation.

Conclusions

The implementation of DSCRs presents both opportunities and challenges for care providers, staff and people who draw on services. While digital systems can improve efficiency, visibility and data management, successful implementation is hindered by suboptimal choice of supplier, inadequate planning and resourcing of change, staff concerns, technical limitations and limited accessibility features. External support and internal strategies such as phased implementation, comprehensive training, and strong leadership play a vital role in overcoming these barriers. However, ensuring digital systems meet the diverse needs of care recipients, relatives and providers requires a tailored and proactive approach, balancing flexibility with standardisation and addressing usability concerns such as poor Wi-Fi, language barriers and accessibility limitations with suppliers.

Ongoing affordability and continuation with DSCRs are a concern for the future, especially for small providers.

Funding

This award was funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research programme (NIHR award ref: NIHR163639) as part of the Social Care Rapid Evaluation Team (NIHR153673) and is published in full in *Health and Social Care Delivery Research*; Vol. 14, No. 16. See the NIHR Funding and Awards website for further award information.

Chapter 1 Introduction

Policy context

United Kingdom policy-makers have argued for some time for the need to digitalise health and social care.[1] This agenda received a significant boost following the coronavirus disease discovered in 2019 (COVID-19) pandemic, which both pushed the sector to rapidly adopt digital technologies as many activities moved online and exposed the lack of data available to support decision-making by policy-makers.[2,3] Digitisation of care records held by adult social care providers is seen as critical step to increase the amount of information in the system, but the government also argues that digital social care records (DSCRs) will help the system to deliver on its vision of transforming social care.[3,4] The anticipated promise of DSCRs is that they will help practitioners to provide safer, better-quality and more personalised care through providing timely access to the right information and give individuals and their families more control over their care by enabling them to view the information held about them. There are also expectations that once organisations have adopted DSCRs they will seek access to relevant digitised information held by other organisations and share the information they hold with other approved individuals.[5]

Policy with respect to the digitisation of social care records has focused on adult social care providers, by which we mean Care Quality Commission (CQC) registered care home and home care organisations, as adoption has been slow compared to local authorities (LAs) and children's social care. DHSC estimated that in 2021, only 40% of adult social care providers were fully digitised, with the rest still using paper records.[2] It was also reported that the rate of adoption had been slow, at just 3% per year.[2] At that time (c. 2022), it was also thought that many of the largest national providers – those that are part of the CQC market oversight regime – were still using paper records. To improve this picture, the government made funding available and introduced a target to ensure that 80% of CQC registered providers would be using DSCRs by March 2024 (later extended to March 2025).[6]

The plan to digitise care provider records was one element within the £150M Digitising Social Care (DiSC) Programme announced in the *People at the Heart of Care* white paper.[2] Led by NHS England and DHSC, the DiSC Programme aimed to drive the digital transformation of adult social care. It had several objectives alongside pushing the rapid adoption of DSCRs, including testing, evaluating and scaling the use of digital technologies, building the evidence base for future investment, and supporting care providers to boost their digital readiness, including digital skills, connectivity and cyber security.[2,6] In line with these ambitions, alongside funding for the adoption of DSCRs and scaling of other technologies, government developed a range of other resources to support care providers and LAs on a dedicated website.[7] Resources included an *Adult Social Care Digital Skills Framework*, and the *Digital Working in Adult Social Care: What Good Looks Like* (WGLL) Framework, which consolidates guidance for councils and care providers on achieving effective digital practices in adult social care, emphasising DSCR adoption, broader digitisation efforts, data management and security, and the importance of connected systems for better and safer care management.[8,9]

The support offer for care providers included matched funding for the upfront costs of adopting a DSCR and funding for integrated care system (ICS) hosted staff. These staff provided direct implementation support to care providers adopting DSCRs. Care providers could only access matched funding if they used a supplier on the *Assured Supplier List (ASL)*.[10] Launched in April 2021, the ASL was developed to enable care provider organisations to more easily make more informed purchasing decisions. It provides a list of quality-assured supplier solutions that comply with a minimum set of capabilities and standards for DSCRs.[11] In this respect, an important commitment was that by January 2024 all assured DSCR solutions were expected to enable proportionate access to general practitioner (GP) record information for authorised staff within providers – now referred to as GP connect.[12]

As stated, the original aim set by DHSC in late 2021 was to reach 80% uptake of DSCRs across CQC-registered adult social care providers by March 2024. Although official estimates show that uptake has steadily increased, by February 2024 only 63% of providers had adopted DSCRs.[13] Consequently, the deadline for meeting the target was pushed back a year to March 2025. Official estimates show that as of January 2025 75% of care providers had adopted DSCRs with many more in the process of adopting, suggesting that the government is on track to meet its 80% target.[14]

Digital social care records in England

A DSCR, also known as an electronic care plan, enables the recording and sharing of care information digitally, replacing traditional paper record keeping and management.[15] DSCRs can record information related to a range of care functions (e.g. assessment and review, care plan development and monitoring, medications management, etc.). Most systems have additional functionality, including allowing the individual and authorised third parties to view the records, automatic reporting/audit facilitation, real-time sharing of data with systems used by other practitioners or in other settings, and working offline/via a mobile phone. An online searchable database of DSCR suppliers provides a full summary of functionality offered by each solution on the ASL.[7,10]

There are many suppliers of DSCRs; stakeholders we spoke to estimated over 50. Of these, 16 are on the ASL as of 11 April 2025, although the number on the ASL fluctuates over time as standards evolve and suppliers develop their solutions.[10] DSCR solutions can be targeted at specific social care settings (e.g. home care providers, care homes) and types of clients (e.g. children or adults). Some companies have products for multiple settings (e.g. Everylife's PASS system is available for home care and care homes and Access group have systems for LAs and social care providers), but even where companies offer solutions for multiple settings, these tend to be stand-alone products and do not necessarily allow for real-time information sharing. Among DSCRs targeted at the same settings, each company has a slightly different value proposition, relating to the content captured, design and functionality of their software/platforms/apps, the extent of set-up, implementation and aftercare support, and the varying options for different price points.

Existing research, evidence gaps and focus for the research

Although digital records have been used in social care settings for many years, our rapid scoping review reinforces previous findings that there is limited evidence about the experiences, consequences and economic impacts of DSCR adoption and implementation in social care provider settings, especially in the context of sharing data with approved practitioners from other organisations.[16]

With respect to the benefits of digitisation, Greenstock highlights potential benefits of DSCRs across several dimensions, including workforce productivity, the quality of documentation, the quality and safety of care delivered with positive outcomes for people drawing on services, including improved sense of control where people can access their own records, improved collaboration between staff within and between organisations and financial benefits.[17] However, much of the evidence reported is ambiguous about the extent to which these benefits are realised for care organisations. An uncertain picture is also presented by scoping reviews of DSCR implementation in social work settings and nursing homes which find that the complexity and impracticality of some digital systems are time consuming for staff, leading to negligible time saved and preventing them from spending time with clients.[18,19] Conversations with stakeholders to scope this work reflected this sense of uncertainty: they questioned whether the implementation and ongoing costs of using DSCRs would deliver financial and non-financial benefits to provider organisations. While policy-makers have made the case for digitisation at a national level, for care providers the business case is less clear.

Research exploring the implementation of digital records points to several reasons why the expected benefits of DSCRs fail to materialise. There are many implementation challenges. Greenstock's review found organisational challenges, related to their capacity to innovate and readiness for DSCRs including, a lack of digital leadership and knowledge at different levels of seniority within organisations, variations in digital skills and views on prioritisation of digital change among staff, infrastructure issues, and lack of resources to move from paper to digital records.[17] Another reason why benefits are not realised is that they are simply unrealistic. This was particularly the case in studies focused on data sharing between DSCR systems; the necessary degree of interoperability between different systems to enable data to be accessed in one place was not yet there.[16] Organisations can work on building trust and relationships to establish data-sharing agreements and support communication, but governance and regulatory constraints beyond the control of local organisations were a key barrier to cross-organisational data-sharing efforts.[16]

While the evidence base reports on potential benefits and implementation challenges, the stakeholders we consulted expressed several concerns. These were often the inverse of the potential benefits – for example, less access to information and less time for quality care based around strong relationships. They also related to fears about how the information that is held within DSCRs about both care staff and people drawing on care is stored, kept secure and is being used. Another issue raised by stakeholders was the concern that digitisation may further exclude already marginalised groups of people and exacerbate existing problems, for example around the workforce supply and working conditions. Learning from the implementation of health records suggests that inequalities can be exacerbated, particularly in relation to age, race, socioeconomic circumstances, education level and literacy.[20] It is important to understand whether DSCR implementation exacerbates inequalities, or more positively leads to more inclusive practice.

Much of the existing evidence explores the use of systems designed many years ago and in the UK context, used in LA settings.[16] Studies tend to note that the material properties and functionality of the technology are important determinants of uptake and use.[18,21] The context for the current adoption drive in England is therefore quite different, focusing on care providers using recently developed DSCR solutions, at least by contrast to the systems in use by LAs. The DSCR systems have modern interfaces and features, are designed to be used on the go so offer mobile/offline options, and have portals for people who draw on services and approved family members/carers to access/contribute to care records and receive hospital discharge information. Some of these solutions have been designed in collaboration with the social care sector and the suppliers may offer aftercare support and support packages for implementation. Many of these features, for example co-design of solutions, are identified in research as ways of increasing the chances of successful adoption and implementation of technology and DSCRs.[16,21] This raises the possibility that the experiences and consequences of using systems with these modern features may be different in important ways from experiences with previous systems, and experiences of implementing DSCR systems within LAs – questions that have not been explored in any depth in the existing literature.

Our scoping work suggested that there was an opportunity for a rapid evaluation of the implementation of DSCRs by adult social care providers to provide evidence to support local areas to deliver on the digitalisation agenda and to enhance attention to the issues of equality, diversity and inclusion and the economic and financial implications of adoption for care providers. Given the modern features of DSCRs, we aimed to provide insights of value to an international audience with an interest in the implementation of digital information systems in care-related areas of practice.

Independence

This study was carried out by a team of academic researchers from the Social Care Rapid Evaluation Team (SOCRATES), which specialises in rapid evaluations that are co-created to the maximum extent possible in the time available. Experts by experience from the SOCRATES Public Advisory Group (PAG) were joined by further public advisors and stakeholders with an interest in digital technology to form an Evaluation Advisory Network (EAN) and were actively involved in the study. Two community groups of people who draw on social care and carers also helped to frame the initial ideas for the study.

Evaluation questions

Given the current evidence base and needs of stakeholders, through initial discussions with public advisors, we developed the following research questions and sub-questions:

1. Within which contexts is digitisation of social care records happening and why?
    a. What enables or constrains DSCR adoption?
    b. What approaches to adoption and encouraging adoption are seen as beneficial in what contexts?

2. What are the expectations, experiences and consequences of implementing DSCRs?
    a. What benefits are people hoping to achieve for themselves, others, the organisation and wider system? How do they think these benefits will be achieved?
    b. What benefits or disbenefits have people experienced for themselves, others, the organisation and the wider system?
    c. Have people experienced any unintended consequences of DSCR implementation for themselves, others, the organisation and the wider system?
    d. How do people experience implementation of DSCRs? What has facilitated or got in the way of realising the expected benefits of DSCR implementation? What challenges were expected and what did they do to manage, contain or overcome these challenges?

3. How do people experience using specific features of DSCRs within care relationships?
    a. How are the different features of DSCRs being used by care workers, people drawing on services and their families?
    b. What are the different features of DSCRs being used for? What practices and relationships do they constrain or enable?

4. What are the experiences and consequences of DSCR implementation for people in different social categories?
    a. Do people in different social categories experience the implementation and consequences of DSCRs differently? For whom is this the case and how?
    b. In what way are any differences in experiences of DSCR implementation related to the characteristics of contexts, organisations, relationships or approaches to implementing DSCR?
    c. How are inequalities redressed?

5. What are social care providers' economic and financial considerations in implementing DSCRs?
    a. What are social care providers' perceptions and expectations of the return on investment of implementing DSCRs and what are these based on?
    b. Do social care providers have the capacity to develop estimates of financial investments and costs of implementing DSCRs and willingness to share them for research?

Structure of the extended research article

This extended research article is structured as follows: we set out the design of the study, and methods used in sample recruitment, data collection and analysis in *Chapter 2*. This includes a summary of the EAN contributions to the overall study and ethical considerations. There are four chapters reporting the findings: *Chapter 3* discusses adoption and non-adoption; *Chapter 4* sets out the digital journey; *Chapter 5* examines the impact of DCSR's on care relationships; and *Chapter 6* discusses equality, diversity and inclusion issues. We report on economic and financial considerations for care providers in *Chapter 7*. Our discussion in *Chapter 8* provides a summary of key findings and concludes with the main contributions of this research and implications for research, policy and practice.

Chapter 2 Research design and methods

Theoretical and methodological considerations

The evaluation adopted a theory-based perspective, with a focus on understanding how DSCRs can be implemented by care providers to deliver the anticipated benefits, and the ways in which implementation may need to be adapted for different groups of people and in different sets of circumstances.[22] The detailed design of the evaluation and data collection materials were informed by a rapid scoping review of evidence about DSCR implementation and dialogue with the EAN.[16] This group consisted of members of the public and care professionals (see *Conducting the evaluation with the Evaluation Advisory Network*). EAN members' contributions were determined by their willingness and ability to be involved in the research and the capacity of the research team to support their engagement given available resources.[23] We invited a group of national stakeholders to participate in interpreting and reflecting on the implications of the findings. Dialogue with the EAN and a wider group of stakeholders ensured the evaluation both responded to the issues stakeholders thought were most critical and produced recommendations that were more likely to be enacted. A project protocol is available.[24]

We undertook a rapid evaluation, involving two phases of data collection and feedback to the participating sites and other interested stakeholders.[25,26] The first phase involved all care providers and examined the contexts of adoption (research question 1) and the expectations and consequences of DSCR implementation at an organisational level (research question 2), attending to any equity implications (research question 4). A smaller number of care providers were involved in the second phase which examined the expectations and consequences of DSCR implementation for care staff, people drawing on care and their families and friends (research question 2) and how they experience different features of DSCRs (research question 3), paying attention to equity implications (research question 4). The staging of the data collection accommodated the longer timelines for ethical review and approval associated with gathering the perspectives of the people who draw on care and their families. It also ensured that participating sites received feedback in a timely manner to improve local implementation of DSCRs.

The project included an economic component, in which we sought to understand the economic impacts of DSCR adoption and implementation. A full cost-effectiveness analysis was not feasible given the rapid timescales and resources available. Therefore, we sought to examine the economic and financial considerations for social care provider organisations when implementing DSCRs (research question 5). Given concerns we had over the capacity of care providers to engage in this aspect of the project, our research examined providers' understanding of the business case and expectations for returns on investment of DSCRs and, with a smaller number, their capacity to estimate their actual returns on investment. Even these more modest proposals, however, were difficult to achieve due to availability of data and the capacity of care providers (see *Chapter 7*).

Site and care provider selection and recruitment

Understanding context is important for studying DSCR implementation, given the different ways in which ICSs have delivered the DSCR fund and supported care providers to implement DSCRs, the numerous DSCR suppliers used by providers, and the different types and operating conditions of providers. We therefore explored DSCR implementation by care providers across multiple and varied contexts across England to generate evidence that is contextually sensitive and more broadly useful. Case studies provide a means for in-depth study of a phenomenon in context and are particularly well suited to studying the dynamics of change processes, such as the adoption and implementation of DSCRs.[27,28] However, case studies are resource intensive, and as the number of cases increases, it becomes necessary to move to more quantitative approaches to synthesising information across cases.[28] This approach would not have met the needs of evidence users interested in both breadth and qualitative descriptions of implementation. We initially proposed recruiting 15 care home and 15 home care providers, working with a small number of these to generate in-depth case studies through multiple data collection methods.[29] However, this

approach had to be abandoned as we had limited success gathering data through methods other than interviews, due to a lack of capacity within care providers to facilitate additional data collection and share documents within our rapid timeframes and limited resources.

After contacting 29 care homes and 13 home care providers, we recruited 19 care homes and 11 home care providers. Care providers were recruited from four sites (covering five ICSs) across the country, via the Digital Leads (or people with responsibility for delivery of the DiSC Fund) working for each integrated care boards (ICB) and in collaboration with local Clinical Research Networks (CRNs). CRNs paid all participating providers £100 (or £150 in London) to support their engagement with the study. Sites and care providers were selected purposefully to build in variety and provide opportunities for intensive study of key features that the EAN and scoping review suggested may influence DSCR adoption and implementation.[16] We sought to select sites that were geographically and socioculturally varied and were at differing stages of digital maturity, as understood in terms of DSCR adoption and partner relationships. Similarly, we selected care providers of different types (care homes and home care agencies) and at differing stages on their digital journey (non-adopters, adopting/recently adopted, a year or more post adoption).

The characteristics of the sites and care providers are outlined in *Table 1*. Care providers offered diverse services, including residential care, home care and outreach, to various adult groups. Clients included older adults, people with learning disabilities, mental health problems, dementia, sensory impairments, physical disabilities, autism and vulnerable adults. Some providers catered to veterans, ethnic minority communities, and adults with alcohol and substance misuse. Care providers also varied according to size, whether the organisation was privately owned or had a charitable status, and whether it was part of a larger group. [We did not recruit any very large providers (i.e. those within the CQC oversight programme) as they were working directly with NHS England on DSCR implementation.] In terms of technology, care providers were using a range of DSCR suppliers, with nine different DSCR systems in use at the time of the fieldwork by providers in our sample, and some were using other digital technologies.

The length of time that care providers had been using DSCRs varied. There were four early adopters (two home care agencies, two care homes) where DSCRs had been in use prior to 2020 and were well established within care provision. Some of these providers had used precursors of more recent DSCR systems. A further 18 were relatively new adopters (15 care homes, 3 home care agencies), with some having had the DSCR in place for between a year to 2 years, some less than a year and some who were still in the process of implementing the (current) DSCR. We recruited seven care providers (four care homes, three home care agencies) who had not (yet) adopted DSCRs. Additionally, there was one home care provider that was categorised as a non-adopter since it was operating without a DSCR; however, it was in between DSCRs having abandoned a system and currently waiting to adopt a new system. Another three care providers reported previously abandoning DSCRs.

Ten care provider organisations participated in stage two, but not all of them were recruited through the first stage. Of the 22 care provider organisations who had adopted or were in the process of adopting DSCRs, 9 participated in the second stage of the evaluation. One provider did not respond to our invitation to participate in phase two, while two other providers declined due to capacity and time constraints. To ensure we retained diversity and did not overburden participating sites, we recruited one further organisation through the EAN. DSCR suppliers used by the participating care providers were also recruited through the EAN's contacts, and three out of five of these agreed to participate. The providers participating in the second phase of the work helped us to recruit care staff and people drawing on their service and their families. Each care provider helped us recruit our target of three care staff, but it was harder to recruit the target of three people drawing on care and/or their relatives. Staff from care providers reported that clients or relatives did not use the patient and family portal enough to be able to contribute to the study. In some cases where relatives were recruited but not people drawing on care, this was due to their reported incapacity to take part in interviews, for example due to dementia, or acute disabilities or learning disabilities. Three providers agreed to send us information about the business case they had developed for DSCRs, but not other documentation. We recompensed the providers participating in phase two for their efforts in supporting recruitment and the study with a £100 payment to be used for staff well-being initiatives.

TABLE 1 Characteristics of sites and care providers in the study

Integrated care system	Digital maturity[a]	Character of ICS[a]	Care providers recruited	Care provider characteristics	Client characteristics
Nottingham and Nottinghamshire	Reported being behind target with DSCR adoption	Covers 2 LAs; rural and urban; 662 active locations for social care organisations	Five care homes (one adopters > 1 year, three recent adopters, one non adopter) Three home care (two adopters > 1 year, one abandoned[b])	Three nursing homes; two residential care homes; three home care organisations A mix of franchises and public limited companies	Residents and clients were described as mainly older people; one care home also offered care and support for people with mental health problems for all adult ages
Lancashire and South Cumbria	Reported to be on target with DSCR adoption.	Covers 4 LAs; rural and urban; 916 active locations for social care organisations	Four care homes (two adopters > 1 year, one recent adopter, one non adopter) Three home care (one adopter > 1 year, two recent adopters)	Three residential care homes; one nursing and residential Three home care, one of which includes a reablement service A mix of family/private owned, LA funded, and voluntary/charity services	Clients included older people, adults with disabilities, dementia, sensory impairment, mental health problems, learning disabilities, vulnerable adults and autism
South West London[c]	Reported to be on target with DSCR adoption.	Covers 6 LAs; urban; 754 active locations for social care organisations	Three care homes (three recent adopters) One home care (one recent adopter)	One home care service for ethnic minority communities; one nursing home; one care home; one residential/supported living service A mix of family/private owned and voluntary/charity services	Clients included veterans and their relatives, older adults, adults from ethnic minority communities, adults with dementia, adults with mental health problems and learning disabilities, and adults with physical disabilities
South East London[c]	Reported being behind target with DSCR adoption	Covers 6 LAs; urban; 680 active locations for social care organisations	Two care homes (one recent adopter, one non adopter) Two home care (one recent adopter, one non adopter)	Two care homes; two home care organisations A mix of family/private owned and voluntary/charity services	Clients included older adults, adults with dementia, adults with mental health problems and learning disabilities, adults with alcohol and substance misuse, and adults with physical disabilities and sensory impairments
Dorset	Reported to be on target with DSCR adoption.	Covers 2 LAs; rural and urban; 439 active locations for social care organisations	Four care homes (two early adopters > 1 year, one recent adopter, one non adopter[b]) Three home care (one recent adopter,[d] two non adopters)	Providers included one nursing home, two care homes, one supported living, respite and outreach service, and three home care services A mix of family/private owned and voluntary/charity services	Clients included adults with mental health problems and learning disabilities, older adults and adults with dementia

a Data from October 2023.
b Planning to adopt.
c To be treated as one site so as not to oversample London.
d Preparing to implement at time of interview.

Data collection methods

The evaluation was carried out in two phases. The first phase took place over March–April 2024 involving 30 interviews with care provider senior leaders/managers and 3 interviews with senior leaders from DSCR suppliers; the second phase took place over August–December 2024 involving 30 interviews with care staff and 23 interviews with people drawing on care and/or their relatives. All interview participants were aged 18 or over and were able to provide informed consent. *Table 2* provides a breakdown of interviewees by care provider type. All interviews were semistructured and covered the research themes of adoption and non-adoption, perceptions of the expectations and

TABLE 2 Characteristics of interviewees by provider type

Type of interview	Home care	Care home[a]	Roles
Care provider senior leader	12	18	Registered manager, Operations director, Owner/Registered manager, Director/ Registered manager, Financial Controller, Head of Operations, Head of Care, Team leader
Care staff	13	17	Care worker, senior care worker, care supervisor, registered nurse, office manager, deputy manager, team leader
People drawing on care/families	9	14	Relative, care/nursing home resident, outreach client, home care client, respite client

a One provider was a group that included residential and supported living, respite, and outreach, and one client interviewed from this group was in receipt of outreach support.

consequences of implementing DSCRs, people's experiences of implementation of DSCRs and using DSCRs within care relationships, and economic and financial considerations, as appropriate depending on the individual participant role and the provider's stage in the adoption journey. We adopted an equity lens for all interviews and explored the experiences and consequences for people from all social groups, either by asking people to reflect on their own experiences or on what they had observed. Where they were being used by care providers, in phase two, we focused on gathering insights into participants' experiences with the following DSCR features/functions: patient and family portal; data sharing with external organisations, for example DSCR to GP Connect; DSCR interoperability with other technologies; real-time use and offline functionality; speech to text; attaching images to records; icons and emojis; and analytics packages. (Please refer to interview schedules in *Report Supplementary Materials 1–4*.)

Interviews lasted between 30 minutes and 1.5 hours, depending on the individual's role and experience of DSCRs. We adopted a flexible approach to conducting interviews to maximise people's ability to participate. This included putting interview questions on flashcards for face-to-face interviews with people drawing on care. All interviews with senior leaders of care providers and suppliers were conducted online. For care staff, 20 out of the 30 interviews were conducted in person, with 10 online. For people drawing on care and their relatives, 17 out of the 23 interviews were conducted in person, with the remaining 6 online. Interviews generally involved only one interviewee, but three interviews with care provider senior leaders involved two interviewees; pairs included the Registered Manager and deputy, and the Director with the Financial Controller. One telephone interview from phase two involved a home care client with their relative supporting translation. Five of our 53 phase two interviews with people drawing on care, their relatives, and care staff were conducted by peer researchers from the EAN (see *Conducting the evaluation with the Evaluation Advisory Network*). All interviews were audio-recorded and auto-transcribed using either Microsoft Office (Microsoft Corporation, Redmond, WA, USA) software or aTrain, with researchers tidying up transcripts as they analysed the data.[30]

We obtained written informed consent from most participants prior to interview, but to facilitate participation (e.g. where the person had limited dexterity) formal consent was confirmed verbally before starting the interview and audio recorded with permission. All participants were given a £20 voucher as a thank you. All names used in this report are pseudonyms. All participant data files were pseudonymised in line with ethical and research governance procedures.

Analysis and synthesis of data from phase one and two

In all multisite research, there is a tension between attending to the local situations, as understood through the individual cases, and attending to the phenomenon, as understood through analysis across the cases. In rapid research, this tension is heightened due to moving speedily towards a cross-case synthesis of the findings. We adopted a structured approach to chart and reduce the data we collected as the fieldwork progressed while retaining the situational understanding that relates to a care provider's specific context, using the Rapid Research Evaluation and Appraisal Lab (RREAL) Rapid Assessment Procedures sheet.[31] The RREAL sheets provide a structure for tabling

the data collected and support a hybrid deductive-inductive approach to the analysis, sharing similarities with framework analysis.[32]

We structured the RREAL sheets (see *Report Supplementary Material 5–8*) by the research themes (research questions) and subthemes (reflected in the interview questions). The researchers completed a separate RREAL sheet for each of the four sites (the two London sites were treated as one site), following the division of labour for data collection as each researcher was in charge of data collection at different sites. To facilitate analysis a separate RREAL sheet was completed for adopters and non-adopters for and within sheets we separated home care agency from care home data, and data from different types of interviewees. This structured and deductive approach facilitated analysis across a team of researchers and helped to move rapidly towards data reduction.[33] To ensure the analytical process could develop novel insights from the data, the research team met for a 2-hour analysis session on three occasions over each data collection and analysis phase (six in total). In these sessions, the team discussed and compared the findings emerging from across the data set, as data were collected.[34]

To guide discussion in the sessions, we differentiated between 'headnotes', which were our impressions from the interviews conducted so far, and 'fieldnotes', which were the information as recorded ('indexed' and 'charted') from the transcripts according to the RREAL sheet structure.[32] We used the notion of headnotes to reflect on our initial impressions and what was significant or unexpected in the interviews, either due to its absence or presence in the data.[35] In addition to helping the research team to familiarise themselves with all the data collected, identify key issues across the data, surprising findings, and important areas to focus on in remaining interviews (or next phase), this process encouraged researcher reflexivity. Acknowledging that what we attend to in an interview situation is in part related to our professional and personal relationships to the subject, by discussing what strikes us as important, and the contrasts between what different people find important, we were able to develop reflection during rapid analysis.[34,36]

The analysis sessions were facilitated by one of the Co-Principal Investigators. In the sessions, each member of the research team was invited to speak in turn about their headnotes from recent interviews, and these thoughts were recorded and summarised by the session facilitator. In between sessions, the research team reflected on the relationship between the summarised headnotes and the fieldnotes, bringing any important points missed or differences of interpretation back to subsequent sessions for discussion. This approach proved to be an effective way of triangulating data across a fairly large team and achieving consensus on key findings that could be fed back rapidly to the EAN and participating sites to gather additional insights and reflections on the findings (see *Stakeholder engagement with and input into the study*). It also ensured the expertise of all team members was brought to bear throughout the analysis.[34]

In the final phase of the analysis, a member of the research team drafted the findings for each of the research themes, that is adoption and non-adoption, experiences of implementing DSCRs and the consequences, experiences of using specific features of DSCRs within care relationships, economic and financial considerations, and issues around equity and social inclusion. In this final analysis phase, there was further refinement of findings as the researchers reflected further on the data from different participants. Where quotes are given, the data were systematically fictionalised by replacing potentially identifiable features (e.g. names) with equivalents that did not change the original meaning.

Economic data collection and analysis

The aim of the economic data collection and analysis was to understand social care providers' economic and financial considerations in implementing DSCRs. In the phase one interviews, we asked senior leaders of care providers to assess their business case in simple terms, the investment required, and the value added to their current service (see *Report Supplementary Material 1*). These interviews suggested that it would be difficult to collect quantitative information, as decisions were not supported by a formal business case. In phase two, we tested this further and explored care home senior leaders' perspectives on their investment decision in more detail with three care home managers/leaders with financial oversight. (We could not recruit home care providers to this part of the study). Through these conversations and sight of the business cases these providers sent, we determined that it would not be possible to collect quantitative data on costs and benefits.

The analysis of the economic and financial considerations of implementing DSCRs draws on the business cases from the 3 care providers, data from the 22 interviews with care provider senior leaders who had adopted DSCRs, and the supplier interviews indexed in the RREAL sheets. To enumerate the range of costs (including upfront and ongoing) and realised benefits (both monetisable and non-monetisable), all data which had been indexed to the RREAL sheet sections on economic and financial implications and consequences from DSCRs were coded using a 'conventional' approach to qualitative content analysis, in which the categories 'flow from the data'.[37] We also included an analysis of the business cases, loosely comparing the content against the HM Treasury Green Book.[38]

Conducting the evaluation with the Evaluation Advisory Network

This was a co-created evaluation, underpinned by the principles of co-production, but acknowledging the challenges of adhering to these principles given the relatively short timescales and geographical spread of sites. Co-creation of new knowledge through rigorous research involves collaboration in co-ideation, research design, implementation, and collection and interpretation of data.[39] To develop the ideas which informed the proposal, we consulted with stakeholders and had two in-person meetings with community groups who had relevant lived experience. We then set up the EAN in 2023 during the preparatory phase of the project, with a remit to guide and conduct the evaluation with the research team. EAN members came from across England and included people with professional expertise and knowledge of DSCRs, such as consultants, regional care provider managers, managers of adult social care organisations, and members of the public who had contact with adult social care services or who supported relatives drawing on adult social care. The EAN included members of the SOCRATES evidence users' network and PAG, then expanded as sites were recruited to the study to include public and professional members from each of the sites (although no members were recruited from London). In total, the EAN group included 14 members: six public members and eight professional members (*Table 3*).

All EAN members were provided with an information sheet outlining the purpose of the group and agreed to participate on that basis. A member of the research team (NF) managed the group, planning and organising meetings in discussion with the rest of the research team. Three members of the SOCRATES PAG delivered training to the academic researchers to develop academics' skills in co-creative research.

We held three EAN meetings over the course of the project. Each of these took place online via video call which lasted 90 minutes. Public members were offered £25 per hour to cover preparation, and attendance in group meetings. Recompense was offered as a cash payment or shopping voucher, depending on preferences. Some members of the EAN elected to take a larger role in the project, with two members acting as peer researchers in phase two of the study, and three members co-presenting and co-facilitating findings with the research team at the end of project stakeholder workshop (see *Stakeholder engagement with and input into the study*).

The first EAN meeting took place in the preparatory phase of the study to plan and develop research materials for phase one. EAN members drew on their lived and learned experience to provide guidance on research design, including priority areas to focus on, questions to ask, and methods to use. This meeting was also informed by the evidence from the rapid scoping review and discussed gaps in the current evidence base, particularly around settings and participants, the methods and theories, and findings of previous research.[16] We used the structure of a 'theory of change' to make

TABLE 3 Distribution of EAN members by site

	Public members	Professional members	Total
SOCRATES network and PAG	3	3	6
Lancashire and South Cumbria ICS	0	2	2
Nottinghamshire ICS	3	1	4
Dorset ICS	0	2	2

the material more accessible, working through the aims of DSCRs, what works, what the issues are, and how they are addressed.

The second EAN meeting took place towards the end of phase one to share and explore preliminary findings in order to guide implementation of phase two interviews with care staff and people drawing on care and their families. In this meeting, EAN members helped refine interview schedules and made suggestions about how to focus the next phase of the study. EAN members who were living in the site areas were invited to work as peer researchers. Four people expressed an interest and participated in co-training. We held an initial information session to discuss what the peer researcher role involved and to provide an opportunity for questions and answers. This was followed by two 2-hour online training sessions. These sessions included discussion around the principles and ethics of interviewing, EAN members gave academics guidance about what it would be like to do interviews in settings which EAN members knew well, and EAN members were able to practise asking interview questions. EAN members were also asked to feedback about what they felt confident doing and where they felt they needed more practice; they were then supported to develop confidence in these areas. Although four peer researchers were trained (one carer and three professionals) due to an unexpected increase in caring responsibilities for one, and a change in workload for the other, only two EAN members carried out in-person interviews. This, combined with limited access to research sites, resulted in fewer peer interviews than we had hoped. The two peer researchers conducted face-to-face interviews with staff and family members in two sites.

Members of the EAN contributed to analysis and sense-making in three ways. Following the phase two data collection, peer researchers met with two members of the research team to reflect on their involvement and identify themes for analysis. Emerging findings from phase two were also discussed at a full meeting of the EAN and this helped focus attention on key issues to discuss in the planned knowledge exchange activities, including identifying key audiences for the findings. Three members of the EAN (one PAG member, one peer researcher, and one other) then attended the knowledge exchange event; two of them presented findings and all of them participated in the discussions which contributed to the development of the recommendations in this report, as described in the next subsection.

At the end of their involvement, all EAN members were invited to participate in a reflection activity, facilitated by the SOCRATES PAG training group, so that lessons could be learnt about how to strengthen involvement and influence in future evaluations.

Stakeholder engagement with and input into the study

A key aim of rapid evaluation is to provide decision-makers with actionable evidence in a timely manner.[25,26] The main evidence users for this work were the participating sites, including the digital leads in the ICSs and care providers, and a wider group audience that included policy-makers with a focus on digital transformation of adult social care from central and local government, digital leads in ICSs and care providers that did not participate in the study, national and local leaders for digital from charitable organisations and those supporting providers and care staff, arm's-length bodies, like CQC, researchers and the public. We held two online sessions, after phase one and phase two of the study, to feedback to the participating sites and begin to engage this broader audience. The feedback sessions shared preliminary findings with the aim of providing participating sites and stakeholders with actionable data that is 'good enough' to inform decisions.[40] These sessions also provided the participants with an opportunity to discuss, challenge and validate the preliminary findings (see *Publications*).

To facilitate the wider group of evidence users to act on the findings from the evaluation, we held a stakeholder workshop at the end of the project. The workshop lasted 2 hours and included presentations of the findings by the research team and members of the EAN. The second half included a world café style discussion designed to facilitate dialogue between the various stakeholders.[41] The participants were provided with three topics for discussion and were split into three groups, with each group spending approximately 15 minutes discussing each topic and developing recommendations for practice and policy. Topics were actions around non-adoption, ethical considerations around keeping people informed about their data, and what needs to change to get the most out of records and ensure safety.

Each discussion was co-facilitated by a member of the research team and an EAN member with a further member of the research team scribing. Attendees included policy-makers and senior figures in digital adult social care, representatives of care provider organisations, the Department of Health and Social Care, ICBs and charitable organisations for digital and adult social care. Several attendees worked with the research team to finalise the recommendations from the project, make them actionable and more likely to be taken up (see *Acknowledgements*).

Chapter 3 Understanding adoption and non-adoption

A key part of the DSCR implementation process is the adoption/non-adoption decision. In this chapter, we explore this decision from the perspective of senior leaders of care providers. We consider what influenced care providers' decisions and whether there are particular types of care providers or their circumstances that affect the outcome of the adoption decision. We also examine what sources of information care providers drew on to inform their decision and choice of DSCR supplier. We pay particular attention to the financial aspects of the decision, and how care providers articulate and developed a business case for DSCR adoption.

Interpretations of digital social care records

Participants had varying interpretations of DSCRs. Some senior leaders and care staff understood DSCRs to be only the care plan and notes about the care delivered in a digital format, while others talked about the 'digital system'. This encompassed the whole infrastructure, including supplier hardware, such as devices used in care homes; software, such as the interfaces, mobile apps, care plans and notes; information delivered through separate software and potentially a different supplier, such as medications management information delivered through electronic medication administration records (eMAR) software; and data shared by and with other agencies and organisations. Some senior leaders appeared to base their understanding on the specifications that funders for digitalisation projects had provided. One care home manager thought that understanding of DSCRs depended on the length and extent of use:

> *I think it's where the different homes are on their journey with the DSCR.*
>
> *Care home senior leader 15*

There was no shared understanding around whether access for people drawing on care and/or their relatives was part of DSCRs. Some participants saw this as an integral part of DSCRs, while others felt it was an additional feature; still others were not aware that these (optional) features existed. There was confusion and limited knowledge among people drawing on care and sometimes relatives. While some people drawing on care could describe DSCR content, devices and systems in detail, others were unsure what was meant by a DSCR and whether records were kept or the care they received was documented in a digital way. Relatives were usually aware of what DSCRs consisted of, though there were questions about data sharing and consent (see *Chapter 6*).

Given the breadth of interpretations around what constituted a DSCR, data from participants often strayed into discussing the broader digital infrastructure and journeys, including other software beyond that for care planning. Discussion of the digital journey throughout this work, from adoption, through implementation to further adoption and/or abandonment, therefore, reflects the different understandings participants have of DSCRs.

Policy attention alongside concerns about affordability

Government attention on the digitalisation of social care and the availability of specific funding for adoption of DSCRs was a factor affecting the pace of adoption. Suppliers had seen a significant impact on their businesses, with one noting that there had been 'huge growth' (Supplier 1) over the years of the DSCR fund. Several care providers also reported that the availability of funding and grants had made a real difference to them. Some described how they had been interested in adopting a DSCR system, but did not have the financial means to move from paper-based recording or using standard electronic office software to using more sophisticated, but also more expensive, digital record systems. They viewed access to funding and grants as important support for their businesses. This was the case for smaller and independent care providers who felt they did not have the financial room for manoeuvre that larger organisations have – a view echoed by suppliers:

> *It's just meant that organisations that wouldn't have that money readily available, especially small and medium organisations, suddenly have funding available and they can procure and it just means it's a much easier decision for them.*
>
> *Supplier 1*

Despite the availability of funding from government, some smaller organisations still had concerns around the costs of implementing and maintaining DSCRs. Three care home senior leaders cited these concerns as a reason for non-adoption, with one noting that other financial commitments were 'more important than actually getting a digital system in place' (Care home senior leader 9). Concerns around affordability were linked to funding issues facing the sector, rising costs of delivering care and concerns over demand. Smaller care providers said they were seeing reduced numbers of referrals, fewer social care funded residents, and no increases in funding per resident while running costs increased. One senior leader explained their priority was paying staff a good wage, leaving little for 'extras' which is how they viewed DSCRs.

It was not only non-adopters who raised ongoing affordability as an issue. There was also apprehension among some senior leaders who had adopted DSCRs about future affordability. One home care senior leader worried about the DSCR supplier increasing their annual fees and the impact of this on their business (Home care senior leader 10); another was concerned about the possibility of being locked into a supplier despite the DSCR not meeting their needs due to the costs of switching:

> *I think we signed it to five years at the moment, which is quite long period of time to be signed in. […] Also the problem you've then got is that if you're digital and they've got all your records in one place and you say I want to go somewhere else, how much of a job is it to literally move everything somewhere else? The reality is now impossible.*
>
> *Home care senior leader 6*

Senior leaders expressed that more sustainable funding from the government would help them to mitigate any cost increases. A further concern related to training costs and the need for training was cited as a reason for non-adoption by two care home senior leaders. Some senior leaders noted a lack of digital skills across the staff team and that training needs may be extensive. The free group training offer was thought to be inflexible and not suited to small providers who do not have the capacity for whole staff team training. They thought training should be tailored and that suppliers should also offer the option of one-to-one training sessions for staff. Concerns about potential annual mandatory training at additional cost were also raised. Senior leaders suggested that additional financial support would be welcomed, and this should include provisions to prevent risks to small care homes of closure due to unmanageable future costs.

Not all care providers appeared to be switching to DSCRs willingly. One home care senior leader reported that they had implemented DSCRs because 'there's so much pressure' (Home care senior leader 11) from the CQC. Although staff at this provider were happy with paper systems, they moved to digital to align with perceived CQC requirements. This was a view reflected in discussions with suppliers, who recognised that some care providers were coming to them as they felt pushed into adoption:

> *And… [they say] look, we've sort of been told we've gotta do this and if we don't do it now, we're gonna lose out on having some money to help us do it.*
>
> *Supplier 2*

There was some confusion among both care home and home care providers about whether DSCR adoption was a legal requirement, with some senior leaders believing that they would be marked down in inspections, unable to attain an outstanding rating, or shut down if they did not adopt. One senior leader recalled that this had been reported to providers in a county care association forum. Strong feelings were expressed by one senior leader who had not adopted about the idea of mandatory DSCR adoption, stating that if adoption was mandatory, this would be a reason for closing down, if clients and staff were also against it.

In contrast, others saw going paperless as 'moving on with the times'. Suppliers noted that for early adopters of DSCRs this was probably the primary motivation, but later adopters were motivated by the understanding that there would be benefits to them from adopting DSCRs:

> *So, they're certainly coming to us much more informed with an expectation as to what they want to then get out of it [the DSCR]. Honestly, years ago it was … there was none of that, […] I couldn't even tell you why organisations would really sign*

> *up, apart from that they knew that digital was the way forward. But you'd have to be very forward thinking to really kind of sign up for it.*
>
> *Supplier 1*

Expected benefits and disbenefits are informing reasoning around adoption and non-adoption

Reasons for adopting or not adopting DSCRs centred on whether senior leaders in care organisations expected the DSCRs to benefit clients, staff and the organisations. In cases where care providers had felt pushed to adopt, suppliers discussed the importance of care providers buy in, and their role in helping clients to see what could be achieved:

> *We have to educate them … because we won't sell to somebody unless they understand why they're going into this, because it's not just about mandating it, it is actually about the improvements in care.*
>
> *Supplier 2*

Increased accuracy of record keeping providing better evidence

A key benefit of DSCRs reported was accuracy of records, enabling organisations to have better evidence about care provision for inspections and in case of any inquests or legal proceedings, a factor driving adoption for many care home senior leaders:

> *The number one driving factor actually was to improve our records.*
>
> *Care home senior leader 18*

Care home senior leaders reported that prior to DSCRs, when recording incidents, staff needed access to the limited number of computers on site. This meant that staff would memorise information about accidents and incidents that had occurred and wait until the end of a shift to write them down. In addition to not being timely, data quality was usually low, and recording was rushed and partial, with staff relying on their capacity to recall information from earlier in the day A further consequence of using shared computers for recording was that if care home staff were called away to attend to a client while they were in the process of recording, they may lose the information, either because the system logged them out or because someone else was using the computer.

Senior leaders from four care homes hoped that going digital would help them to comply with the CQC, expectations and policies, through improved record keeping. This centred around the ability to evidence the excellent care being delivered to their residents:

> *We recognised that we were providing an excellent service. However, in the same breath, we recognised that the evidence to back that up wasn't really there.*
>
> *Care home senior leader 17*

Another care home senior leader was motivated to adopt DSCRs to help support staff who do not speak English as a first language. This person felt that CQC can sometimes judge records harshly for spelling mistakes, or 'lack of flow', without considering that some staff are not native English speakers. It was hoped that using DSCRs with a speech to text function could help staff who are non-native English speakers to improve recording.

Improved accessibility and more timely access to records increasing efficiency and safety of working

A key expected benefit, expressed by senior leaders was that going digital would help them to work more efficiently.

> *We were very inefficient in how we were working […] So many operational bottlenecks.*
>
> *Care home senior leader 17*

Since moving to DSCRs care staff are using personal computers (PCs) and 'tightened up' timely recording of accident and incidents, rather than waiting until the end of their shift, or access to a computer and relying on their memory.

Care home senior leaders reported how DSCRs can help care homes work more efficiently by enabling staff to have more timely access to clearer records and making it easier for senior leaders to pull reports together. They discussed how DSCRs hold data about residents in one easy-to-access location enabling staff in care homes to, for example, easily access hospital passports and medication files and eliminate the need to access paper files. Digital records meant that notes would be more legible, and senior leaders spoke of not having to 'find a folder on a shelf, open it up and … then decipher somebody's handwriting' (Care home senior leader 2). By having records held digitally in one place, care home senior leaders expected to keep better track of records and improve the organisation's adherence to the General Data Protection Regulations (GDPR):

> *I could see clearly our weaknesses as a home. A lot of paper records and a lot of sheets flying around going missing. And it's not a good way to keep track of items.*
>
> *Care home senior leader 19*

Home care senior leaders expressed similar benefits in terms of improving the 'visibility' of the business through remote access to real-time information. Home care senior leaders hoped that DSCRs would enable them to have live and accurate updates about when home visits had been completed, rather than relying on workers to report to them manually. The capability of DSCRs to track care staff as they delivered care in the community and improve communication between care staff and central office was cited by seven home care senior leaders as a reason for adopting. The desire to track care staff was not always driven by a lack of trust. Senior leaders described how tracking and monitoring care provision could help to prevent any issues and quickly address concerns raised by clients or relatives, while also promoting safer working conditions for staff who are operating alone travelling from home to home.

Where providers were using paper-based systems, records are kept in a book in the client's homes and relatively inaccessible to management. Senior leaders in home care described how office staff would have access to information about visits, enabling them to immediately respond to any queries from relatives, without having to contact the care staff member. An example given was being able to respond to complaints that staff are leaving home visits after just 10–15 minutes despite clients having paid for more time. Incidents such as these can be tracked and handled by senior leaders/managers more promptly through access to the real-time information on DSCRs.

A further benefit of moving to digital records was the improved capacity of senior leaders to carry out reviews and care audits. Home care senior leaders envisaged how going paperless would remove the need for staff to visit properties to collect 'massive folders' and improve transparency for senior leaders and safety for clients as issues could be picked up more quickly through live alerts. Having remote access to real-time information meant that senior leaders know what care is being provided in clients' homes without having to travel to the home. Senior leaders gave various examples, including reading from the records that a care staff member is struggling with certain tasks and being able to immediately identify actions that can be taken to support the care professional, and reacting immediately to incidents relating to medication or accidents, such as being alerted if medication is missed. By relying on digital recording, senior leaders hoped they could be more responsive, picking up problems more quickly, supporting where necessary, preventing more serious issues while also reducing emissions related to travel. Senior leaders believed that greater transparency would improve quality and safety through the enhanced ability to spot patterns and prevent incidents from occurring, which in turn would improve staff confidence that they have accurate and up to date information to draw on.

These benefits were reflected in supplier interviews, who also described the key benefits of DSCR adoption for home care providers in terms of 'visibility':

> *It's visibility in terms of what is happening. Yeah, in in their delivery. But also, what is happening in their business: one, to get over the quality and safety; another to get visibility into process, operations, business health, and that can be done through more qualitative information that's being input by their team but also through structured insights and data.*
>
> *Supplier 3*

Saving money versus saving time

Care providers hoped that there would be cost savings, yet did not appear to think about the benefits of DSCRs in terms of saving money overall. They reported how going paperless meant that storage costs would be reduced, with one care home senior leader reporting that two boxes of paper records were produced per month in one six-bed home (Care senior leader 18). In general, they identified time savings and anticipated adopting DSCRs would save time for care staff and enable them to spend more time with clients. This was reflected in discussions with suppliers who resisted describing the benefits of DSCRs as being about saving money:

> *So, I think that side of things [saving money] for reporting back on how successful digital [...] is really, really hard to nail down. [...] I don't think it's realistic [...] it's not money saving. It's more about that person's journey in health and care, and [...] the ability for care providers to be able to deliver more hours of care.*
>
> *Supplier 2*

Time savings were expected in relation to the instantaneous access to and updating of information by different groups of staff facilitating communication. One home care senior leader expected that the DSCR would enable sharing messages with all staff via the platform, reducing the need for individual contact (Home care senior leader 3). If something needed to change in the office, or on the rota, staff could be notified straight away through the DSCR. There could also be safety benefits so that office staff could share information with workers more quickly, for example before a visit to a client. There were expectations that digital systems would make it easier to document care and make complex tasks simpler, saving time. Senior leaders saw several benefits for their roles, including updating care plans where the individual is deteriorating rapidly and compiling rotas. One home care senior leader described how being able to organise the rota on a digital system was 'the most important thing' (Home care senior leader 8).

More personalised and better-quality care

There were expectations that DSCRs would enable the organisation to deliver more personalised and better-quality care to their clients. One care home senior leader reflected that the move to digital records was driven by their motivation to provide a whole team approach to care delivery. DSCRs were expected to enable the staff team to support their residents as they are 'task-oriented' and can guide staff through care tasks for clients/residents. Staff are expected to tick off tasks once completed so that none are missed. Three home care senior leaders thought that DSCRs would help to improve staff compliance with required tasks and avoid errors through prompts to undertake activities. In addition to improving the quality of care, senior leaders felt this would give them peace of mind.

There was disagreement among senior leaders in care provider organisations about the extent to which DSCRs allow for more personalised care. Some leaders thought that certain features in DSCRs would help with personalisation and better reflect clients as individuals, for example uploading images to care plans reflecting how someone likes to have their bath, or how to position their wheelchair. This information would help staff unfamiliar with the client to care for them. Senior leaders of care providers who had not adopted DSCRs, however, expressed the view that DSCRs could depersonalise care provision. Task-oriented features were reported as making 'carers feeling like robots going into people's homes' (Home care senior leader 2). Another senior leader of a small care home described DSCRs as not fitting with their person-centred ethos, objecting to 'putting people in drop down boxes' (Care home senior leader 5). It was reported that DSCRs might depersonalise clients' care records, for example, by requiring care staff to use a drop-down menu to tick that a meal had been given, rather than recording detail of what and how much a client had consumed. This was considered insufficient, as one senior leader described:

> *[...] this pre-typed, pre-populated situation [...] Is it gonna give us that real insight into the individual?*
>
> *Care home senior leader 3*

Organisations with less standard operations, perhaps caring for clients that were atypical or with a focus on specific points in people's lives, also highlighted the problem of depersonalisation and fit for purpose. For example, one care home noted that none of the software they had tested captured end-of-life advanced care planning, which would have needed an additional system to manage that aspect of their provision. Some interviewees reported that the systems on offer lacked the flexibility and responsiveness they required, noting that if a new client has a unique ailment, they could

adapt their own recording systems to ensure they are capturing data sufficiently, but they felt this feature was lacking in the DSCRs available. The fit of DSCRs for more unique organisations was a challenge suppliers recognised and formed a part of their thinking around development of the product (see *Chapter 5*).

Involving and empowering residents in their care

Another area of disagreement among the senior leaders was whether DSCRs could increase clients' involvement. Some senior leaders perceived this to be the case, for example, through the patient and family portal people would have easier access to their records and real-time activity. Care home senior leaders wanted to empower their residents to be more involved in their record keeping with one leader explaining that 'written documentation just really doesn't support that' (Care home senior leader 18). This leader wanted residents to have better access and knowledge of their records and, if they wished to be more involved in what is recorded about them:

> *[...] for the people who received the service from us, [...] we wanted to enable them to be involved in a rewrite [...] So many records about people and things that, you know, I wouldn't want written about me. You know, I want people to know when I have my bowels open or when I have my menstrual cycle. [...] So the people we support to be able to be involved but also know what was written about them, if they wanted to.*
>
> *Care home senior leader 18*

In contrast, fears that clients and relatives would not be able to access care records influenced decisions not to adopt DSCRs for some home care senior leaders. They noted how clients were currently able to access their information through paper records kept in their own homes and do not want to use DSCRs. They thought that involvement in their family members care was easier for relatives via paper records.

Improved communication alongside fears around how digital social care records would be used by others

As we have already noted senior leaders and care staff expected communication between groups of staff within the organisation to improve, through facilitating the timelier sharing of notes. Some care staff, clients, and relatives also hoped that DSCRs would facilitate data sharing with people external to the care provider. More clients and relatives mentioned this as an anticipated benefit than staff and senior leaders. They often thought that digital means of communication made it faster to share data, as one client explained:

> *[...] you would have to send the paperwork to someone or phone somebody, but if you've got it on your phone or your laptop in front of you then if people need relevant extra care, for example if someone needs to see Mental Health Care stuff, [they] can then send an email or send a text you know, to make sure the relevant, [...] information [is] sent across.*
>
> *Client 1*

Senior leaders who did not want to adopt DSCRs also expressed concerns about how DSCRs would be used by others. Concerns around data security and hacking were expressed by some senior leaders: 'it will happen. I'm sure of it. I'm sure it will happen along the way' (Home care senior leader 2). Others worried about how data would be used by government and related agencies. One senior leader reported a lack of trust and understanding among their staff about the purpose of DSCRs and why they are required to 'put their information out there' citing concerns that they would be 'spied on' and scrutinised by government. This concern was also reflected by suppliers who reported:

> *There is a big fear that it's a stick to beat them with. I don't think that fear has gone away and I do think a lot needs to be addressed to sort of overcome that.*
>
> *Supplier 2*

A further concern was around how DSCRs would affect communication between different organisations. While some anticipated that DSCRs would enable data sharing across social care and health through the GP Connect function, integration with district nurse systems and by enabling hospital passports, others feared DSCRs would be a barrier to data sharing. Data sharing was an issue with respect to interactions with the NHS, being described as a 'one way street' (Care home senior leader 3) with expectations that social care would provide data to the NHS but not the other way around.

These concerns were particularly acute for home care providers, where information about clients stored by other organisations was described as siloed in different data systems that do not work with each other or with paper records held in people's homes. One senior leader described the situation as 'all cloak and dagger' (Home care senior leader 2). Before digitisation people from other organisations, including care staff and health professionals, would record and share data about home visits in a red book kept in clients' homes. Now organisations with digital systems are not sharing the information with other professionals resulting in staff 'going in blind'. One senior leader described an incident in which a daytime home care provider using DSCRs had not given a client their medication. The client was seen in the evening by a care professional from a different care agency who did not have access to the digital record of the daytime home care provider so was not alerted to the missed medication. Safety concerns like this were cited as a reason for the home care provider not wishing to adopt DSCRs, as they thought a serious incident was inevitable. We also heard from suppliers that larger care providers did not necessarily see the value of sharing data. Their finance teams saw the data in DSCRs as something they owned, and they wanted to explore how to utilise the data they are collecting to deliver benefit to the organisation.

Evidence of suboptimal decision-making on investing in digital social care records

The decision to adopt DSCRs involves two main choices: first the decision to go digital and second the selection of a supplier. As businesses, we might expect care providers to develop a business case for adoption, which would make the case for change and include an options appraisal, setting out the costs, risks and benefits associated with different options, including the 'do nothing' option. Developing a full business case should support businesses to make informed decisions but can take time to put together. Although we did not necessarily expect the care providers that participated in this study, which were small- and medium-sized enterprises with local or regional footprints, to be following HMT Green Book guidance for developing a business case, we did think they may use their own data and data from suppliers to estimate costs, benefits and risks and perhaps a more limited case for change and options appraisal.[38] While there was a decision-making process taking place around whether or not to adopt DSCRs and which supplier to choose, as we describe below care providers tended to articulate the case in qualitative terms. Where data were used, this focused on specific costs or aspects of the decision; none were able to provide us with a full business case.

Providers who were non-adopters articulated the case for non-adoption as less risky, through argument rather than data. Importantly non-adopters did recognise the benefits of DSCR adoption, but saw the risks associated with adoption as greater, meaning that on balance DSCRs were not right for their organisation. In addition to concerns around disbenefits already identified, care provider senior leaders were concerned about organisational disruption. This was especially the case if they felt their existing systems were working well, as one leader explained, 'why fix it, if it isn't broken?'. Senior leaders also expressed concerns that implementation of DSCRs would add additional pressure to staff and lead to lower job satisfaction, causing staff to leave. Given challenges around recruitment and retention across the sector, this was an outcome senior leaders wished to avoid. This was particularly a concern where senior leaders described staff as happy – reflected in the length of time staff were employed by this provider – with positive impacts on the quality of care they provided and consequently client satisfaction:

> *[DSCRs] are not at the top of my agenda […] as long as my agency is 'good' I'm happy with that because I know my clients are happy with that.*
>
> *Home care senior leader 2*

Another senior leader mentioned the COVID-19 pandemic as a reason not to take on further change, stating instead a need for prioritising staff recruitment and 'just focusing on surviving'.

Where providers had adopted DSCRs without feeling pressured into doing so, the decision seemed to be driven by a qualitative appraisal of risks and benefits. One senior leader described drawing on partial data to inform this decision and recalled completing a risk assessment of the paper-based way of working as well as calculating the cost implications of paper-based practices, for example paper, printing, storage/archiving, record-keeping training and changes needed to digitise practice (Care home senior leader 18). Where providers were part of franchises, we were not always able to speak to people involved in those decisions, so it is possible that larger businesses have developed fuller business cases.

As far as we could ascertain from the participants in this study, providers seemed to be making choices based on limited data and partial information.

Care providers' decision-making around choice of supplier was also based on limited information. This was despite suppliers' observations that DSCRs are 'not a new conversation' (Supplier 3) and care providers were much more informed. Finding and sifting through information about options for DSCR suppliers was not a priority for busy senior leaders who were overloaded with information and described not having the time or infrastructure in place to support adoption:

> *[We] didn't know where to look […] [the Council] just kind of said 'we want you to move to digital' […] but hadn't really said how or what you need to do.*
>
> *Care home senior leader 16*

One care home senior leader described that although the ASL was made available as a link in a meeting they had attended, they had not received further information about 'how to adopt' or 'why adoption is beneficial'. Consequently, some providers relied on information from suppliers. However, for some this was suboptimal as they did not consider themselves market savvy and did not trust the suppliers, referring to them as salespeople who would sell anything. This view was influenced by other providers who had told them that some suppliers had been dishonest about the features offered on their software.

Care providers were not necessarily fully appraising different options, due to a lack of confidence, easily digestible information, time and capacity. Senior leaders often reported deciding which DSCR to adopt based on recommendations from peers or receiving a sales pitch from a DSCR supplier at the industry events. For example, one care home chose their DSCR after it was recommended to them by a CQC inspector (Care home senior leader 11); another decided after speaking to and visiting other care providers about the system they used. While some providers found the ASL helpful in informing their decisions about suppliers, others reported lacking the knowledge, time and capacity to work through the suppliers on the list. Some reported that the information was inaccurate and some were unhappy with the supplier they chose from the ASL. Others did not always trial the DSCRs available. We heard only one example of a senior leader working systematically through all the supplier options on the ASLs, watching the demos and subsequently seeking further advice from the Digital Lead at the ICB.

Analysis of the business cases received from three care providers provides evidence about how they are developing the business case for DSCR adoption and supplier selection. The most developed of the business cases involved a basic options appraisal of the costs associated with purchasing or renting devices from a DSCR supplier. Another was a PowerPoint presentation regarding the costs of not adding an analytics package to their DSCR package, alongside the costs of different analytics features offered by their supplier. While these business cases may facilitate decisions about adoption of specific features or packages, they are not full business cases and do not set out a framework for appraising the decision in terms of the benefit to cost ratio, nor in terms of the financial return on their investment.

Senior leaders thought they could benefit from further guidance on how to choose and adopt DSCRs including forums and guides for care providers. Care provider senior leaders suggested they could benefit from better guidance on knowing what questions to ask suppliers before choosing DSCRs, so they can have confidence that software does what they need from it. Appeals for more honesty from suppliers were also made. In general, senior leaders requested more concise guidance on recommended suppliers or 'favourites' to help guide their decisions.

Chapter 4 Experiences of implementing digital social care records and the consequences of implementation

This chapter builds on the findings from Snow *et al.*, integrating the perspectives of senior leaders, care staff, people who draw on care, their relatives and DSCR suppliers on the installation and implementation process, providing a detailed description of the digitisation journeys for care records.[16] Our focus is on describing the experiences and consequences of the journey. We first set out the common challenges experienced by providers, identifying what influences the likelihood that providers experience these challenges or negative consequences. We then describe the strategies or activities employed by providers to mitigate, manage and overcome these challenges. Finally, we explore how multiple problems, and a lack of solutions can lead care providers to abandon DSCR solutions.

Common features of digitisation journeys

Participants in the research reported variable experiences of the digitisation journey, with some very positive and some very negative accounts. Despite this variety in sentiment, the challenges faced during the installation and implementation process were broadly similar and centred around four domains: the complexity, length and resource-intensive nature of the installation and implementation process; staff anxieties around adoption and resistance to change; problems with the technology, and its dependence on the wider technology infrastructure. The extent to which these four features made implementation difficult varied between providers, in part due to the choice of DSCR and other characteristics of their business, but also because they had often adopted strategies and activities to manage or mitigate the effects of these problems, as we describe in the subsequent section (see *Strategies for managing challenges*).

Implementation is a complex, lengthy and labour- and time-intensive process

The process of changing from paper-based working to using a digital system was recognised as complex, laborious and very time-consuming and came as a bit of a surprise to some senior leaders. Tasks required to implement successfully were manifold: transferring all paper-based records to the DSCR; senior leaders and care staff installing and learning new hardware and software; training all staff on how to utilise the system; informing health and other professionals and LAs about their plans to implement; and explaining reasons for implementation and getting consent from residents and clients and, if needed, relatives. While most senior leaders were aware of how laborious and time-consuming the process was, to some this was unexpected, with consequences for how well these senior leaders had planned for and resourced the change process (see *Planning and resourcing the change process*).

The most substantial task for senior leaders was moving paper-based records over to the digital system. Suppliers described this as a 'big thing' (Supplier 2) for providers and estimated that it took about 8 hours to input a single record onto the system, and the degree of burden associated with this process was reflected in leaders' accounts:

> *It's true that it's making things easy for you, but somebody has to go and make sure that they have the information in there [the DSCR] […] this is an added workload to make sure that the information is put in the system.*
>
> *Home care senior leader 10*

Care providers described how it could take several months to complete the transfer, although this could vary significantly according to the size of the organisation and its ability to commit resources to transferring records. Suppliers described how organisations take different approaches, including doing it 'as they go', paying staff overtime, bringing in a member of staff temporarily to input data, or outsourcing to a third-party provider (Supplier 2). For small organisations, this task fell to one or two people, and some senior leaders reported working on weekends and bank holidays for extended periods on top of their daily workloads. The challenge of digitising records being compounded by these staff members not being well-versed in technology.

Two care providers reported hiring an information technology (IT) consultant to support the business for a short period to transfer some of the paper records to DSCR, excluding any personal information or care plans. They felt that the

extra investment had helped them move more quickly to the new system and prevented senior leaders and staff feeling overwhelmed with the associated workload during implementation:

> *His job […] was primarily to support us to, to take some of the fear, because at the end of the day we are nurses or healthcare workers […] this is what made our journey a lot easier.*
>
> *Care home senior leader 4*

However, one care home senior leader had a poor experience of using an external agency. The leader cited a lack of control over the process and the agency's insufficient knowledge of the residents. As a result, some records were transferred incorrectly.

As suppliers recognised, the length of time required to digitise all paper records meant care providers typically had to work in a hybrid way during implementation, using paper-based records as well as the DSCRs. This meant duplicating work to prevent information loss. Although challenging and seen as unwanted duplication by many senior leaders and care staff, hybrid working did have some more positive benefits. One senior leader indicated that it had helped to wean staff off paper (Care home senior leader 19). Another senior leader intentionally kept the duplication of the recording for a few months to compare paper-based and digital records and detect differences and mistakes to inform training and advice to care and other staff.

Staff anxieties about digital technologies and change

One challenge that almost all senior leaders faced was dealing with staff concerns and resistance to adopting and using DSCR systems. Senior leaders and care staff described colleagues in their teams that were hesitant or lacked confidence and knowledge when being asked to use DSCR devices or features/applications on devices/mobile phones. Some were afraid of doing something wrong or breaking devices. Changing from handwriting to typing was described as another challenge for staff not used to typing. The use of speech-to-text functions, as an alternative, also had its own challenges as transcription was low quality and needed a lot of correction (see *Chapter 5*). As a consequence of their lack of confidence and discomfort using DSCRs, care staff would work on paper alongside the DSCRs duplicating activities and/or sometimes use the DSCRs incorrectly (e.g. forgetting to clock out) creating additional work for senior leaders/managers to manually correct mistakes.

Some care staff in home care also voiced concerns about being monitored via the application on their (private) mobile phones, but senior leaders explained that any monitoring was part of 'lone worker policies' and only worked when staff logged into the system when starting a shift. There were also concerns around data safety and the risk of cyber-attacks, which were not unwarranted as some senior leaders acknowledged. There were also concerns from home care staff about using data allowances within their own mobile phone contracts and costs of electricity for using, and repeatedly charging, their mobile phones. Some senior leaders said that data and power use were minimal, but this was disputed by some care staff. While some care staff reported being able to charge their phones and battery banks in the office, this was not always possible.

Problems arise from the technology and infrastructure

We heard many positive reports about how the DSCR technology was easy to use and navigate and made care staff and senior leaders' jobs easier. They could quickly update and check care plans and because notes were better organised, it was easier to find and share relevant information. This instant access to standardised information was reported by some as a marked improvement over the previous system:

> *You can instantly say, oh, this person has had this X amount of fluid today, you know, this is how much they've eaten, […] this is what medication they've been able to take or, you know, whether they've had […] paracetamol or anything, or whether they felt unwell over the last few days; it's easy to access. Whereas before you'd be, you know, it's a case of who was on shift. […] And like, oh, well, you know, who recorded, did somebody record that?*
>
> *Care staff member 7*

Not having to decipher handwriting was seen as a positive, as it meant notes were easier to read. Additionally, care staff appreciated the additional security and reliability of digital records over paper records, which could easily go missing,

be tampered with or accessed by people without the correct permissions. For example, a team leader in home care mentioned that digital records were clear and accurate, with no scope for crossing bits out or losing information.

Despite these successes, from the accounts of senior leaders in care providers it seemed that disappointment about DSCRs not being fit-for-purpose was part of the digital journey due to technical issues, lack of automation, clunky interfaces and poor usability, or missing features. Examples given included inability to retrieve data from more than a week ago, a lack of alerts about updates to records affecting care staff's ability to stay informed, navigation to necessary forms being too complex, difficulty navigating and recording due to continuous addition of new features and misleading titles or headings within the system that led to mis-documentation, especially if staff were not properly trained. For instance, recording a 'cup of tea' under 'supper' instead of 'drink' was a common error with one DSCR as it was listed under the incorrect heading. Another system could not perform basic tasks, such as assigning identifier numbers to clients that were crucial for referencing and invoicing. This led to senior leaders manually adding identifier numbers to the surname column.

Interactions between the software and the hardware or the software and the wider technology infrastructure were sometimes problematic. For example, devices could need frequent updates, which slowed down processes and made tasks more difficult to complete via the DSCR. Some senior leaders, both from care homes and home care providers, reported that poor internet connectivity or reliability led to problems with the DSCRs functionality. For care homes, this was related to not having strong enough Wi-Fi to connect devices, while senior leaders in home care were concerned about poor mobile coverage, especially in rural areas, or internet access in clients' homes. Offline working features and seamless synchronisation of data with the wider system when workers were back online were seen as essential, but this function did not work consistently well across DSCRs and sometimes was absent leading to an array of negative consequences (see *Chapter 5*).

Similarly to senior leaders, many care staff reported that permanent technical glitches around access and repeated updates to the DSCR system had made documenting care delivery difficult and frustrating and felt the system was unreliable. These problems seemed to affect home care staff more than care home workers. Many care staff felt that in general features in apps or on devices needed to be made more 'user-friendly', especially the ability to change font size and integrated translation features (see *Chapter 6*). Others thought that suppliers should make changes to the software to add or improve features, such as the ability to take and share photographs and e-signing, so they did not need to use complicated and time-consuming workarounds (see *Chapter 5*).

Most care providers sought to work with suppliers to improve or fine-tune features, but the success of this strategy depended on the responsiveness of suppliers (see *Communication with and support from the supplier*). Several senior leaders indicated that they thought that no system was perfect and that both greater development of whole systems and bespoke individual fine-tuning was still needed to make DSCR systems work for them:

> *We were happy with certain aspects but we were basically all come back to the same issues. I mean, it might not work with [this supplier], but then we'll look at something else again. I don't know whether any of them are perfect, to be honest, that's the problem. I think they're all finding issues and trying to deal with them. And I know it's not that easy to write software and change things, is it? So, [supplier] took on full time developers, so I feel or we felt like [supplier] was going the right way.*
>
> *Home care senior leader 8*

Strategies for managing challenges

In this section, we outline the range of activities and strategies that care providers introduced to support implementation. These range from ensuring careful planning and resourcing of the change and activities to create the right environment for delivery, through to training and pilot testing activities to support learning. As we describe, however, in addition to variations across providers in the adoption of these strategies, there can be substantial variability in the quality of, or way in which, these activities were carried out. This has important implications for experiences of DSCR implementation and the effectiveness of these strategies in helping providers to manage and overcome the challenges they face.

Planning and resourcing the change process

Implementing DSCRs is a major time-intensive task, involving challenges and requiring good planning and preparation for successful implementation, as this senior leader recalls:

> *It's still a bulk job, but again, it's a project, so making sure people know what they're doing, how they're doing it, why they're doing it, getting a time scale, who's doing what and when, off we go and getting it done. I'm probably saying this with rose tinted glasses now because it's such a long time ago.*
>
> *Home care senior leader 9*

Good planning and allocation of the necessary resources for change are important for ensuring digital readiness and organisational capacity for change. It depends on access to good information about what to expect, but not all senior leaders seemed to have had access to this. Despite having access to information about how best to implement DSCRs from suppliers, it was very common for senior leaders not to have fully anticipated the costs and to struggle with this process. One senior leader stated that it had been difficult to adequately assess what was needed because of the lack of guidance from the DSCR supplier, who promised things in the sales pitch that later turned out to not be available (Home care senior leader 3). Senior leaders who struggled thought that more support and transparency from suppliers would have helped them anticipate and address these problems.

For successful implementation, most senior leaders and staff described a process of phased implementation, ensuring required information was available and systems were working before implementing the next part of a system or another feature. Senior leaders said it was important not to rush the process but take time to get everything right, making adaptations if needed and increasing acceptance among staff. One senior leader described this process as 'growing with the system' (Home care senior leader 7). Another described an incremental process:

> *We just started pulling little bits in at a time. And I think that worked. That worked for us rather than throwing everything at them [staff] […] With the day staff, you know, saying, 'right, today we only want everybody just to make sure they record all the breakfast', you know, everybody's have breakfast … we did it in just small chunks like that and they were like, 'well, come on, we can put more on', you know, once they got the hang of it, they wanted to do more.*
>
> *Care home senior leader 8*

Typically, organisations started by digitising all existing material, so this was available on devices or mobile applications when needed. In care homes, hand-held devices were distributed, and staff were trained in documenting care using the devices and synchronising with the wider system. For home care providers they then started using the sign in/out features on the app and accessing information, followed by opening the care documentation features and forms, and finally using medication control documentation (eMAR) among care staff. However, one senior leader described that they had adopted the medication control functionality ahead of other features because it was a specific interest. They felt that overcoming the challenges of what was often described a harder-to-understand feature made adopting other features much easier. Given how long this process can take, two care home senior leaders reported that it was vital to have a plan in place for an unexpected CQC inspection during transfer of care records and wider implementation.

Care providers reported that access to first-hand experience of prior implementation was most useful for planning. In this respect, providers who were part of a franchise or chains were at an advantage as they were able to use resources for planning and preparation from others within the same business. Larger care providers with an in-house IT team or providers with staff who were familiar with technology also seemed more able to anticipate and resource the work involved. For example, one senior leader had been surprised by the time needed to digitise records, so in her current franchise she staggered implementation by installing DSCRs in one care home at a time, and digitising record keeping before adding the support plans and risk assessments (Care home senior leader 18). Some independent senior leaders sought knowledge, advice and support directly from other providers via care associations and other networks to inform their own planning, using the experiences of their peers to understand what could go wrong and how to overcome challenges.

Positive culture and committed leadership for change

Several senior leaders indicated that it took a committed leadership team with a positive mindset to motivate and engage staff to overcome any challenges, such as fear of the unknown or open resistance. This view was echoed by care staff who reported that a positive management culture around the introduction of DSCRs had helped them to overcome any anxieties:

> *[Using tech] it's something that we've continued to embrace and I think people need to be positive about it. You need people who are going to motivate the staff to see the good and the change, … if you don't have your management team, your senior leadership team on board then unfortunately it [use of DSCRs] is not gonna take off. You need people to be invested. […] We've been able to sort of lead that in a very motivational positive way for the staff, whereas I think it [DSCRs] will get those that resist it because the management team are not on board with it.*
>
> *Home care senior leader 7*

A positive culture around DSCRs included explaining the beneficial aspects of the new systems and devices for the business and care provision but also allowing staff to voice their apprehensions and concerns and working with them to overcome fear of change. Some care staff, especially those who were older and less familiar with technology or mobile phones, felt that they wanted to retire, but these were often also care staff who had been with a business for a long time and knew the clients or residents best, so senior leaders did not want to lose these staff members. In contrast with this position, some leaders also indicated that staff had to come on board or would need to leave the business. At the time of interviewing, however, senior leaders said that no care staff had retired or left or was made to leave due to DSCR implementation.

To facilitate the change process and increase organisational capacity for change, several care provider senior leaders described having 'DSCR champions'. These people were volunteers from among their care staff and, in some places, from the wider workforce. They received additional training and initially tested the system and features. After implementation, they received ongoing training and were often responsible for training new care staff and updating care staff on new features and changes to the system. These staff members provided peer support and, in some places, ran 'buddy' systems where new staff shadowed existing staff to learn DSCR processes after induction training.

To work well, some senior leaders highlighted that it was important to have champions in different teams and shifts and at different levels of seniority. Some DSCR champions were also part of a network of champions within a franchise or group of care homes. They were generally viewed favourably by care staff and appeared to work well:

> *We have champions and things like that, and there's a lot of features we still discovered on [DSCR system], as we go along, yeah, there was a few challenges, but, you know, with the right support on the floor, it's been tackled.*
>
> *Care staff member 24*

Senior leaders also generally thought that champions worked well, but in one home care agency, management realised their strategy of 'buddying' less confident users with digital champions to facilitate peer-to-peer learning had backfired when one champion reported that other champions were sharing 'workarounds' with their buddies.

Care providers who were part of franchises or groups benefited from the leadership of project managers who were responsible for rolling out digitalisation and other projects across all members of the group. This was seen as helpful as there were more people involved in the transfer of documents and information, and care staff did not need to get involved and could concentrate on providing care. These project managers were often also responsible for communicating with suppliers if there were problems (see *Communication with and support from the supplier*), again freeing up senior leaders/managers and staff to concentrate on providing care rather than troubleshooting. Being a part of a chain or franchise and having project support also helped identify and respond to individual challenges arising, such as additional induction training due to staff turnover.

Training for everyone who will use the digital social care records

Training was described by senior leaders and care staff alike as an important investment to address staff anxieties and ensure digital readiness, but the costs of training were often underestimated by care providers. This is perhaps not

surprising as there were differences across DSCR suppliers in what was available and how it was priced; the cost of training depended on how it was delivered, the length and timing of sessions and whether it was delivered directly by the supplier or by trained staff from the care provider. We observed substantial variation across care providers and staff groups in experiences of training, reflecting differences in what was available from DSCR suppliers and the choices made by care providers, which were influenced by cost and other characteristics of the provider (*Table 4*). While some providers were willing to pay for additional customised training from the supplier for care staff, others struggled to find the funds to cover any training:

> *We spent lots of money to cover their shifts and also to pay those that […] had to attend the training on […] days off because we had two lots of – two full days training.*
>
> *Care home senior leader 15*

In general, care providers tried to minimise the spending on training provided by suppliers by limiting training to senior care staff and digital champions.

Senior leaders and care staff varied in their preferences for how and by whom training should be delivered. Online training has been introduced, partly due to the COVID-19 pandemic, but training solely online continued after COVID-19 restrictions were lifted for senior leaders and care staff. Several senior leaders indicated that they felt initial online tuition was insufficient; however, in-person training also had its detractors. Some senior leaders reported that 'too much information was provided in one go' as training was often just over 1 day. One advantage of the training platforms was that senior leaders were able to go back to videos and explanations whenever needed. As with senior leaders, many care staff felt that in-person training worked better than online or self-organised training:

> *I think the good thing about doing it personally like that is you can ask questions, and they can show you. If you're watching a video, I mean, it could be good, but, yeah, sometimes you can't ask a question, can you?*
>
> *Care staff member 25*

Additionally, most care staff thought formal and adequate training rather than 'learning on the job' was effective in developing familiarity with DSCR systems, features and devices.

TABLE 4 Variation in training experienced by different staff groups

Staff group	Who trained by?	How delivered?	Content of training	Other information about training
Senior leaders, managers (and senior staff)	Almost all senior leaders were trained by the supplier Some leaders were trained by staff from headquarters	In person via demonstrations in the care home/provider offices Virtually via online sessions Via training platforms	A form of induction or basic training in how to use and implement DSCRs, focusing on how the system and features worked One senior leader reported receiving training on data security and the legal framework surrounding DSCRs	Two senior leaders reported never having received any formal training Training by staff from headquarters may have been solely or in addition to supplier training and was found where providers were part of a chain Generally, senior leaders/managers received a mix of in-person, online and training platform trainings
Office staff	Senior leaders reported training by suppliers		Focused on the systems and relevant features for office staff	Training enabled office staff to take on new responsibilities
Care staff	Generally, senior leaders or DSCR champions trained the care staff More rarely training provided by the supplier	Online and in-person training	Using the devices and features for accessing care plans and other information and recording care Usually received explanations about the systems behind these features	Training by senior leaders provided in a top-down, cascading process Generally, care staff received a mix of in-person and online training, but two reporting receiving online only Unclear whether data security was covered

Training materials for cascading training to care staff were highly variable in the breadth and depth of coverage. Some senior leaders had been provided with training materials from suppliers or through their franchises/chains, which they could use directly, but others had to tweak the material or develop the training from scratch as there was no relevant training material available. This situation was the case for independent home care providers rather than care homes or those providers who were part of a franchise, which supported the DSCRs. One care staff member reported that their manager had produced a step-by-step guide that covered everything to do with the system. Another care staff member had produced a video for their colleagues on how to use features.

Experiences of the quality of training varied. While most senior leaders said that the training was adequate, one leader reported poor training in which the basic features did not work during the sessions, the trainer had provided incomplete explanations of processes, and bespoke elements of the training did not happen. Despite the potential for variability in the training, the majority of care staff felt that the training was good or sufficient to prepare them to use DSCRs; although a few felt that better-quality training was needed. Where training was not received by care staff, there were negative consequences. One care home reported how staff lacked knowledge on how to record care provision adequately, which consequently led to a low CQC rating.

It was recognised by senior leaders and staff alike that some care staff need more training or to be trained over a longer period due to unfamiliarity with technology or devices (see *Chapter 6*). Given variability in the preferences and needs of care staff and care providers, suppliers that offered training over a longer period and customised their training to the needs of the care provider were highlighted as better suppliers. Knowledge about adequate and successful training and support received by other care providers was named as one of the reasons why a specific DSCR supplier was chosen. However, some senior leaders were less enthusiastic about additional training since it came with extra costs that they were not willing to pay. While some senior leaders found the system was self-explanatory once they had familiarised themselves with the features and devices, others thought they needed additional training. They felt that training for all the features that they used should be free-of-charge.

Participants in the study also pointed out that training was an ongoing consideration. Several care staff noted that as new features were constantly introduced or changes to the systems made, it was vital that training did not cease after initial implementation. The introduction of new features was something that senior leaders recognised as a challenge, as they were often integrated without proper explanation, making the systems more complex and potentially more difficult to use. It was also the case that training needed to continue for new staff and care providers were doing this as part of an induction or onboarding training. Many senior leaders, however, indicated that staff were often already familiar with DSCRs due to more widespread adoption. This was echoed in interviews with care staff who reported that they had used DSCRs before joining their current employer, and only needed an introduction and shadowing colleagues for a period rather than having to be trained on something completely new.

Pilot testing and 'in situ' training features

In addition to receiving formal training, many senior leaders said that it was important to be able to test the systems in situ prior to implementation. Testing happened in different ways. Several senior leaders invited members of the workforce to volunteer as digital champions and test the features and systems before rolling them out to the whole workforce and other involved parties. For those in care home groups, senior leaders reported that the integration and implementation of features was initially conducted in one home to assess the wider impact and then implemented in other homes. A similar process was used to test new features, leading to recommendations for wider implementation or providing warnings about certain features (e.g. speech-to-text transcription features being faulty when used with heavy accents and poor programming – see *Chapter 5*).

Senior leaders also felt that being able to learn to use the system and test its features using a non-existent 'example' resident, in a separate training environment of the system ('sandbox'), had helped new and existing staff to develop familiarity with DSCRs and grow in confidence. This also supported staff to overcome fears of doing something wrong or any resistance due to unfamiliarity.

Data security and contingency planning

Strong systems for ensuring data security alongside a contingency and business continuity plan were seen as vital to ensure continuity of care in the event of a cyber-attack. As one provider who had suffered a cyber-attack in which all digital records had been lost explained:

> *You have to have a good continuity plan, a Plan B. If anything goes wrong because the trouble is you become too reliant on this technology. And if there's any issues, any blackouts or data loss or cyber-attack, you can then find yourself really vulnerable, and we actually learned that hard lesson. […] You've got to make sure you've got backups. Things like offline, you've got to be doing all that because if you don't, you're being in an absolute mess.*
>
> *Home care senior leader 7*

Given two home care senior leaders reported having experienced cyber-attacks affecting care provision and many more reported internet connectivity issues or instances of the system going down completely, this view seems judicious. In two settings working in a hybrid way, duplicating records, with staff storing information in both paper and digital format was described as an early contingency plan. However, senior leaders and care staff felt that this was not sustainable in the long term and digital back-up systems needed to be implemented.

Ongoing engagement and communication with staff and other stakeholders

To ensure digital readiness and that the DSCR solution align with the needs of staff and partners, senior leaders detailed how important it was to be open and transparent and involve all staff in the planning and implementation process. It was especially important to involve staff with no experience of DSCRs, staff who would usually not be part of strategy meetings, and staff who only work weekend or night shifts. Some senior leaders indicated that they had also involved stakeholders, such as GPs, pharmacists and other external professionals coming into the home, during the planning phase to seek their input and advice and to be able to discuss the process and potential concerns. Another senior leader experienced in digital implementation noted that they 'involve everybody from our laundry staff to our nursing team' (Care home senior leader 4).

Some providers described how they had involved staff in the planning, with the intention of making the positive case for DSCRs and ensuring their concerns and previous experiences of using digital systems, were heard and considered. This also meant, being flexible and changing the initial schedule to address staff concerns. Senior leaders described that they had regular meetings with all staff before and during implementation to identify potential challenges and to identify staff who would be willing and able to take on leadership roles. This included the role of DSCR champions, and testing the new systems and running pilots to inform the roll-out.

While some care staff said that they had been involved in the planning and implementation process and could voice concerns, this was not always the case. Several care professionals thought they were not involved in the planning process but were simply informed about timescales for DSCR adoption and implementation. They also reported not knowing the reasons for the adoption of DSCRs. Some care staff felt that not being involved in the planning had caused some resistance among staff, especially among those workers who had been with a provider for a long time.

Communication, involvement and training for clients or residents and their relatives

The goal of all planning was to make the transition as smooth as possible, so that clients and residents were not negatively affected. To achieve this, some care providers involved volunteers from these groups in planning and piloting, but, in most cases the focus was on communicating the change to people drawing on care and their relatives to educate them about what to expect:

> *One of the biggest things for me was […] making sure that we educated our clients, that they understood why the care professionals were on their phones and what they were doing, and not just playing on their phones when they were used to seeing them writing in a book […]. It was just considering all of those points to keep the [care provider] feel and so that people understood why we were doing that as we moved across.*
>
> *Home care senior leader 9*

When given the opportunity to reflect, senior leaders who had not communicated the switchover from paper to digital with clients and relatives thought the process would have been smoother if they had prepared people for the change.

Senior leaders communicated the change to residents, clients and their families in different ways – verbally and through letters – and several described needing to set aside a substantial amount of time. Senior leaders reported first needing to inform people that the transfer was planned and what it involved. They then explained the devices and applications before launching the first features. Some senior leaders also felt that it was important to show clients and families new ways of working individually to help them overcome any confusion or unease and to listen and react to any concerns. Senior leaders reported that not everyone was interested or able to engage with the DSCR system and features; they cared more about the quality of care provision and how this might be affected.

Explaining the devices and application to people drawing on care and their relatives was seen as important for reassuring them that care staff were using their phones for work – a key point of tension (see *Chapter 5*). Care homes used additional strategies to reinforce this point, such as putting the devices used for DSCRs in brightly coloured cases to make it clear that staff were not on their phones and displaying signs reminding people that staff were using DSCRs. It was easier for care homes to reinforce this message than it was for home care agencies, since staff of the latter were more likely to be using their own mobile phones. Care staff who felt confident to explain the DSCR to clients reported that people were often receptive to digitised recording practices:

> *We feel like communication is key here. So, if you explain, it's not like you're on your phone texting […], I find that they don't have a problem. […] actually nobody had a problem with me doing that.*
>
> *Care staff member 21*

The experiences of people drawing on care and their relatives around communication about DSCR implementation were varied. While some people drawing on care said that communication had been sufficient, others were unsure whether they had been informed. Several relatives of people drawing on care felt that there had been a lack of communication when DSCRs were introduced, stating they were given the link to the software or app without sufficient information or explanation or opportunity to ask questions: 'It was landed on us' (Relative 8). This problem was associated with using the patient/family portal features to gain access to information about the provision of care, but it was also a broader issue affecting aspects such as invoicing that had also become digital. While some, especially younger, relatives felt that the features were self-explanatory and easy to navigate, for others the digital transition caused considerable disruption. Affected relatives felt that a warning from care providers that it might take some time to get used to the new system would have been useful.

Both people drawing on care and relatives thought that training would have been useful to fully understand how DSCRs worked and their potential benefits and disbenefits. One home care professional agreed with this perspective:

> *Training for clients would help them access their records and prevent them from thinking staff are on their phones. […] they could have a better understanding of what the carers are doing. And also, so that it's accessible for them, so they can actually read their reports, not just give them passwords and login details, but we can sit down with them and support them to actually access their records however and whenever they want to.*
>
> *Care worker 22*

Some relatives suggested that in the absence of formal training, short videos showing how DSCR systems and features worked would help them. Making videos available in other languages was also suggested. Training may not be necessary for everyone, as some people were able to navigate digital apps, and others, echoing the observation of senior leaders, were not interested in their documentation; their focus was on hands-on care, quality of the care provision and relationships with their carers.

We heard two examples of care providers including people drawing on care and their relatives in the implementation process for the portal and delivering training or some form of support. One nursing home, still in the process of installing the portal, introduced it gradually and asked relatives for two features they would include. The senior leader, experienced

in digital implementation, believed this approach increased the likelihood of relatives using the portal, as it allows people to adapt to using a feature before another is introduced. A home care provider had also assigned a staff member to support relatives with access and usage and held an online meeting to demonstrate how to log onto and navigate the portal.

Communication with and support from the supplier

Senior leaders valued having ready access to support from suppliers to troubleshoot and address any problems they were experiencing with the system during the implementation and embedding process. However, experiences with supplier support varied considerably. Many senior leaders felt that they had access to sufficient and ongoing support, but others reported unresponsive services and were unsure about supplier support during and especially after the initial installation of the DSCR system.

The suppliers in this study reported having dedicated teams to support their customers; however, the organisation of these teams, how they interacted with care providers (proactively or reactively) and the expertise within them varied. This variation was reflected in the experiences of care providers. Some senior leaders spoke positively about access to a 24/7 helpdesk where the operators are responsive. Several senior leaders reported having a named and allocated customer support team member who knew the business. This was considered important, though its value depended on the expertise of the allocated person. While some care providers received some bespoke support through access to the allocated support team member, not every senior leader was happy with the support received as they felt that they were too often directed to lengthy manuals or online training videos instead of receiving direct hands-on support. Being able to access support via different means, such as e-mails, phone or video-conferencing software, was seen as helpful.

In addition to being on hand to support providers, several senior leaders would have appreciated if their supplier had monitored their progress following the initial training and provided ongoing feedback. They felt that the complexity of the system and features made it necessary to be supported during implementation:

> *You're like, 'Oh this is so cool'. You're going to get to know these things, you'll put all the details in, but then all of a sudden you're like 'alright hold on, am I doing all the right things?'*
>
> *Care home senior leader 19*

A willingness to make changes to the DSCR software in response to the feedback from care providers was seen as important for ensuring that care providers could properly use the DSCR. For example, care staff described differing issues with logging into the system on Android and Apple smartphones and appreciated that a solution was provided quickly by the supplier once they had made senior leaders and the supplier aware. It was also important for ensuring that care providers could get the most out of DSCRs given their context and organisational goals. Several senior leaders felt that their suppliers understood the sector, and this was reflected in how they developed the technology, either because they had personal experience of running a care home or providing care or because they listened to care providers. These suppliers made changes to their systems based on the advice or suggestions of care providers:

> *They worked with us and there was stuff that the system didn't do that we needed it to do ... it took time, but they got it to do it. [...] I saw something come out about wound care the other day. There's an upgrade and I looked at it and thought, 'oh my God, they've actually done it. They've done exactly what we asked them to do'.*
>
> *Care home senior leader 18*

All of the suppliers described how customers' suggestions are a key source of ideas for development. However, they noted that there were multiple demands on their development teams, especially from government requirements, and that capacity to take forward these ideas can be constrained:

> *Yeah, basically it's just having the resource to do it. So [...] with the NHS standards that took a huge amount of resource and a lot of things that would normally have been ... So obviously you've got [...], you know, bug fixes and all the normal stuff that goes on, but the extra stuff, the innovative stuff I think has suffered because of that [demands due to roadmap]. [...] And so when we certainly when we talk about the things that customers have asked us to implement that is not necessarily an integration, but a change to the software that's been a bit slower.*
>
> *Supplier 2*

Again, care providers in larger chains were in a better position, as they were more likely to have access to IT support which could be a substitute for support from suppliers to a degree. Smaller or independent care providers that did not have IT support reported that lack of support from suppliers made adoption and implementation challenging. Care providers reporting abandoning DSCR systems often stated the lack of supplier support as one of the main reasons. One provider said that they were left without a functioning system for months after a cyber-attack had affected their system and the supplier failed to support them. Another reported that the supplier had made them feel as they 'were the problem' when concerns were raised; they were also told that their 'standards were too high and that there was nothing to worry about' (Home care senior leader 8). These sentiments were echoed by other senior leaders who were unhappy with their supplier but had not (yet) abandoned their systems.

Many problems and a lack of solutions can lead to abandonment

Where problems were manifold, persistent and having a negative impact on the ability of the senior leaders and staff to deliver good quality care, we often saw care providers start to question the wisdom of continuing with the DSCR. For these care providers the DSCRs were not meeting their expectations.

This was the case for one home care provider that was experiencing a range of interconnected issues which revolved around staff not feeling confident using the DSCR, technical problems with the DSCR, not feeling able to use devices in front of clients, lack of Wi-Fi, and having many short visits with tight timelines. These problems were time-consuming for both care and office staff, with the office manager spending 2 extra hours per day on additional administrative tasks to address gaps in data recorded on the DSCRs, as this office manager explained:

> *There are a few updating [the DSCR], but for them it's like extra work as well. Like, if they're going to the client four times a day, they can't be updating four times for the client. […] It's just like too much time consuming. […] Some are there for 30 minutes only. […] expectations are too high [from] the clients. Whereby the paperwork, they can just scribble and then that's it. They're done. And the client can visualise what they've written.*
>
> *Care staff member 28*

The senior leader at this organisation wanted to change DSCR suppliers, but she felt stuck with their chosen DSCR. Despite the time burdens it had created, she worried it might cost even more time and funds to switch suppliers. Having gone through this experience, another home care senior leader reported that moving suppliers was lengthy and complicated, taking around 2 years. The process was further complicated by reported delays to upgrades and false promises from companies. Changing supplier involved starting 'from scratch' and having to go through most of the implementation steps again, albeit trying to avoid any mistakes made in the past. One care staff member described changing from one supplier to another as a painful process:

> *Because we had to transfer over all of the files ourselves. Myself and the home manager […] we took it on ourselves to do that. And we're very competitive, so we hit deadlines. But yeah, it took a lot of time in work time and home life. But after the process, it's been a learning curve, but we're over six months into [DSCR name] now and finally getting used to it.*
>
> *Care staff member 5*

What tipped care providers over from thinking about abandoning to abandonment seemed to be when they lost trust in the system due to a combination of problems and a lack of support from the supplier to resolve them. An example of this was given by a home care senior leader whose staff were struggling with the sign in/out feature; due to prioritising client's care needs and having no time to record they had learnt to trick the DSCR app into recording different times for when they signed in and out of their visits. Although the Chief Executive Officer had raised this problem with the technology supplier, they reported that they had not rectified the issue. This meant that the organisation could not trust the data on the DSCR:

> *I thought I that was the one confidence I'd had that at least now the logging and logout will be accurate and reliable, but that threw me completely.*
>
> *Home care senior leader 11*

Given the issue had potential knock-on effects for client safety, as incomplete visits could lead to medication not being administered and essential care not being delivered, they had to check manually that staff had been with clients at the times they clocked in and out. The expected benefits of time savings were not achieved, as the senior leader still spent weekends doing rotas, which discouraged her from digitising other tasks. Consequently, the care provider was planning to abandon the technology as soon as the contract with the technology supplier expired.

Care providers who had bad experiences with DSCRs not delivering against their expectations felt that the sector was poorly regulated, with insufficient unbiased support, guidance and resources for care providers.

Chapter 5 Experiences of using specific features of digital social care records in care relationships

The DSCR systems being used by care homes and home care providers in England are modern systems, which have been designed specifically for social care providers delivering care in the UK context. The features of these systems are different from those studied previously, which tended to be accessed via personal computers.[16] The DSCRs used in England have been designed to be used on mobile phones or handheld devices to facilitate real-time data entry as care staff are delivering care. They have user-friendly interfaces, with some being highly icon driven, and as we have already discussed there have been efforts to ensure interoperability of these DSCR systems with other digital care technologies and the digital systems of partner organisations. There are also features to facilitate access by people who draw on care and their families, through a 'patient and family portal', although suppliers' offerings in these areas are variable. Our expectation is that these features have an influence on the usability of the systems within the context of care interactions. This chapter therefore explores the experiences of care staff, people drawing on care and their relatives in using the following features: icon-driven systems and emojis; speech to text; attaching images to records; real-time recording, access and notifications using wireless devices; using reporting and analytical features; patient and family portal; and interoperability of systems and sharing data beyond the care provider. Our focus is particularly on whether these features help to realise benefits from introducing DSCRs through, among other factors, reducing technical challenges, better alignment of recording practices with care practices and improved ability to share and use data held on the DSCRs.

Icon-driven systems and emojis

We heard mixed feedback about interfaces that were heavily icon-driven and used emojis. Some senior leaders and care staff viewed them positively, as supporting care delivery. As an example, care staff in a home that had recently transitioned from an icon-driven system to one that used fewer icons were nostalgic for some of the icons they had lost. One such icon was a picture of a toilet with a red flag that indicated when someone had not been taken to the bathroom for a while; another was a cake icon that would flash on the photo of a resident when their birthday was approaching. The birthday cake icon was an efficient reminder to staff starting their shifts which residents to plan celebrations for, facilitating personalised care. While their new DSCR did include dates of birth, care staff struggled to anticipate birthdays without the reminder: 'since we changed DSCRs, […] it's sort of been missed' (Care staff member 7).

We also heard that icon-driven systems were easy to use and navigate, so supported faster record-taking, especially when compared to DSCRs that emphasised narrative data entry, as this care staff member explained when comparing the two types of systems:

> *Normally during lunchtime on [the icon-heavy DSCR] […] one person could record everyone. Now [on the text-heavy DSCR] one person will record fluids and the other person will record food. [The new DSCR] is time consuming, I would say […] I think it's a good system, I do think it's a good system, but it is more time consuming.*
>
> *Care staff member 7*

Icons also helped care staff with lower levels of English use the system. They reported finding icons were more helpful than large amounts of text, which they sometimes struggled to understand.

Other participants reported that where DSCRs were more icon-heavy, they were less conducive to a person-centred approach, as one senior leader explained:

> *[…] Being able to tick boxes takes away a little bit of the extra detail that we were used to being added. […] Everybody will cut corners and just click the boxes and be like, you know, 'that's my notes'.*
>
> *Care home senior leader 12*

In a similar vein, another senior leader realised that since implementing DSCRs in the care homes within their franchise, the icon-heavy interface was encouraging care staff to record sensitive information using icons rather than narrative. Given the organisation delivered end-of-life care, among other services, she worried about how they would explain that an individual's notes were made via icons were they called to provide evidence in a coroner's court, stating:

> *If you've gone in to check on someone and you've said, basically, they're all okay by clicking [...] the 'okay' icon, well, that's clearly not the truth. They might be pain free; it might appear that all is okay. But [...] I've now maybe got to take those notes to a coroner's court, and how in God's name, if you've been totally icon driven, are you going to be able to stand up in front of someone? [...] You'd be ashamed. You do have to be very, very careful with the notes that you're taking.*
>
> *Care home senior leader 17*

The participant attributed this over-reliance on icons to the design of the DSCR and low awareness among staff of the dangers that icon overuse may carry. Icons are quick and easy to use, and while in this DSCR freehand notes could be made by scrolling down to the end of the care plan, she worried that this gave staff the impression that narrative data entry is a nice-to-have, to include if there is time, rather than an essential part of recording. Her concerns were also reflected in interviews with care staff at a care home in the same franchise:

> *Some people will not add more information to [the DSCR] anymore. [...] When you click on the lunch, there's already the options; chicken, fish, pork, beef, you just click on it ... 'Mr. and Mrs. had fish, small portion, ate half of it'. But they won't describe it was chicken casserole or it was shepherd's pie*
>
> *Care staff member 23*

To support and empower staff to record more personalised notes, senior management implemented extra training and consistently communicated this message in multiple spaces, including clinical care manager meetings, audits, observations and team meetings. However, the senior leader felt that senior leadership need to continue providing staff with constant support and reminders, acknowledging that while using DSCRs had improved the efficiency and timeliness of their records, the organisation had 'gone from one quality data issue to kind of another quality data issue' (Care home senior leader 17).

Icon-driven interfaces were sometimes reported to be restrictive. A care staff member gave a demonstration of their DSCR, showing that to record the mood of the client there were only four moods they had the option of selecting, all as emojis: happy, sad, okay, and bored. While they could add extra notes when they clicked through to the next screen, the categorising of clients' emotions into only four possible categories was seen as problematic. A palliative care provider also found that using emojis to record moods and emotions could be inappropriate for people receiving end-of-life care, questioning what emojis that resemble 'happy' and 'sad' mean for someone who is dying. These participants reported that the nuances of human emotions could be lost if the DSCR does not consider the complexity of social care and the diversity of people who draw on these services in design. As a potential solution, one senior leader suggested adding even more icons to provide a more comprehensive picture of someone's emotional journey throughout the day:

> *[If I could redesign the DSCR] I may ... add more icons, ... But sometimes I just feel the kind of really happy icon and the really sad icon, ... we've far more emotions than that. [...] How do you put down a whole lot of emotions into one icon?*
>
> *Care home senior leader 17*

Speech to text

The 'speech to text' feature is similar to transcription software and converts spoken word to written text. Senior leaders often thought that speech to text saved care staff time and made recording more efficient. Some also thought it made records more accessible to clients, as they could hear and see what was being recorded. One care home franchise was piloting residents recording their own notes via speech to text and providing feedback with resident 'champions'. She thought this was working well:

> *They [resident champions] could put in some of their own speech to text, … saying, … 'it's not Lucy here. It's Dave'. I think this is great. 'I've had a lovely shower this morning. Thanks a million Lucy', …, and those notes were added.*
>
> *Care home senior leader 17*

Apart from one senior leader who was not a native English speaker and was sceptical of how helpful speech to text was for colleagues who were less fluent in English, most senior leaders also thought that speech to text was especially useful for care staff who are non-native English speakers, people with dyslexia or other learning disabilities, or those with poor levels of reading and writing.

However, we found that speech to text was seldom used by care staff due to its lack of accuracy. For example, despite speaking fluent English, one shift leader at a care home said he prefers to type his notes as the DSCR cannot understand what he says: 'You see, my accent isn't really British accent, so sometimes the device doesn't really pick it up all the time what I'm saying or trying to say. So, I tend to type' (Care staff member 23). For other care staff, their fluency in English combined with their accents were a problem (see *Chapter 6*). Rather than speech to text, ethnically diverse care staff at an organisation specialising in ethnically diverse clients thought that a translation feature similar to Google Translate would be more helpful for them. They also suggested that making DSCRs available in other languages would help them and the people they supported to understand written text in the records. This would mean that even if the data were entered in English, the record template could still be navigated in another language.

Other reasons care staff preferred to type rather than use speech to text included negative experiences with the feature picking up background noises, meaning that staff had to be alone to make notes which was difficult in busy care environments. Others found it strange speaking out loud or felt that they jumbled their words when entering notes verbally. Predictive text was a popular alternative which could correct spelling mistakes and make suggestions. One care home staff member thought that this feature made it quicker to record on the DSCR than on paper: 'It's like a red line under or it will show you a correct word' (Care staff member 6). Despite the generally positive views of predictive text, other care staff worried about accepting incorrect suggestions or found that it misspelled names and terms.

Attaching images to records

Before implementing DSCRs, many participants reported that they had been using e-mail or WhatsApp to send and save images to people's care records. The ability to include images in the DSCR was highlighted as a handy feature by care senior leaders and workers alike. How the image feature worked varied by DSCR system, but in all cases it was predominantly used to document wound care and share information with clients and relatives. The feature was not available in every DSCR system and where this was the case, senior leaders reported that, in order to record evidence to comply with regulations, staff used workarounds to record what they had been doing with clients, such as sending pictures via e-mail.

Care staff generally found wound imaging features helpful for monitoring the healing progress of bruises and pressure sores, as well as recording evidence of what injuries looked like. Participants reported that this feature improved the accuracy of incident reporting and increased transparency and accountability, making them feel safer in the care that they delivered and enabling them to take action if needed. However, differences in how different DSCR systems directed staff to record wound care affects how useful they found the function. Aspects reported as helpful included devices with built-in torches which care staff found useful for taking clear pictures, a body map which was helpful in indicating the location of an injury, and automatic alerts to care staff, advising them to routinely check wounds once they had been documented.

Some DSCR systems introduced a level of complexity into the recording of wound care that made the system difficult for care staff to use. Some care staff reported that the DSCR required them to select the injury from a drop-down list before they could save an image of the wound. One senior care staff member reported that the medical language included in this feature was difficult to understand, making it time-consuming to complete:

> *I have to be a doctor to understand what is there because [a] few times I was trying to find exactly that skin problem but […] if I didn't find exactly that yeah, because it's a lot of different names, you cannot to go next one [page]. […] It's not just because I'm not English, no it's even with some of my friends, my colleagues, they don't know what does that mean […], so we wasting time.*
>
> *Care staff member 6*

In another care home, a care staff member reported that the wound documentation feature in their DSCR used clinical terms that were more appropriate for nursing homes. Lack of knowledge about clinical terminology made it difficult for staff to describe wounds correctly, increasing the risk of problems being missed. To address this issue, the participant suggested that the DSCR should provide a short description of what each clinical term means, to support accurate care recording.

Senior leaders and care staff also found that the image feature facilitated relationship building with clients and relatives, with one describing the benefits by way of a 'photo speaks a thousand words' (Care staff member 4). In home care, they could send clients pictures of the care staff member before the first visit, while the care professional would have a picture of the client in their digital care plan. One relative reported that it was easier to receive and provide permission for photos to be added to the organisation's website. A senior nurse in a nursing home also thought that relatives liked being able to see images of their parents participating in activities.

In care homes, one criticism of the image feature in terms of documenting activities was that staff had to take pictures on residents' individual logins. This meant that, rather than taking one group photo and add it to multiple care plans, they needed to add a picture of one resident, log out, log into another care record, and add a photo of another resident. This issue was also raised by an Activities Coordinator in a care home, who was frustrated that it was not possible to upload group photos. Care staff found this time consuming, with one participant finding it easier to use Bluetooth on their own phone to send photos across.

Real-time recording, access and notification using wireless devices

A key benefit of modern DSCR systems is the potential for real-time recording using wireless devices, alongside real-time updating of information within each clients' care record through internet-enabled devices, and real-time access to up-to-date information through synchronisation of the care records via the Cloud. As we describe in this section, there are many benefits from working in real time, but realising these benefits demands that care staff and organisations find ways to navigate the use of devices while working with clients. Realising the benefits of real-time working also depends on stable and consistent access to the internet and, in the absence of this, effective systems for offline working that cache data and synchronise seamlessly when devices come back online. While some care providers reported good experiences, others faced problems that meant they were not seeing the benefits of real-time working.

Real-time recording of care records on devices

Staff within organisations, from senior leaders through to care staff, reported multiple benefits of real-time recording of data notably that recording on portable devices saved them time. The portability of devices enabled care staff to document care tasks promptly and efficiently, for example while they were sitting with residents, rather than searching for limited office space to use a computer or needing to find a table in a client's home. Staff also found DSCRs to be quicker than paper records, as information was stored in one place and they could click icons rather than manually writing everything down, which facilitated updating records on the go. Indeed, one care home senior leader noted that staff used to spend about 4 hours per shift on paperwork, which was reduced to approximately 2 hours, resulting in an estimated time saving of 50% (Care home senior leader 1). Interestingly, several residents in care homes also believed that DSCRs saved time for staff and made the reporting process quicker. Importantly, less time on paperwork was reported to result in more time with clients, enhancing the quality of care provided.

Real-time recording was also reported to enhance the accuracy of care documentation by care staff and senior leaders in care providers, as it reduced the likelihood of forgetting important details. For instance, a senior nurse at a nursing home noted:

> *What we are doing with residents like personal care, we have to write what we are doing, turning and positioning food-wise, what they're eating, how much they're eating, fluids. So, it's really easy [now with the DSCR] because we will do it [at the] same time. We will not forget. It's not like a paperwork that we will go and do it later. We can do it [at the] same time.*
>
> *Care staff member 1*

A lead nurse in a care home also noted that real-time recording facilitated more frequent recording of incidents. Prior to the digital system care staff documented these incidents at the end of the day or several days later, meaning that details and sometimes incidents could be missed. Real-time recording not only improved the accuracy, but also the completeness of care records, with positive benefits in terms of the quality of care that can be provided.

While we heard about many positive consequences of real-time recording, we did hear of one incident that may have had a negative impact on quality of care. A care home resident reported that when she fell over the care staff updated the care records before helping her:

> *When I fell it took them ages and they wouldn't pick me up and they wanted to report it first. And yeah, it was all recorded. I can only go along with that.*
>
> *Client 5*

While we do not have the full details of this incident, it suggests that real-time recording (or perhaps the requirement to record) can encourage care staff to prioritise recording over providing immediate care and support for residents.

Devices as disruptors of the care relationship

A challenge with real-time recording of care records was that devices were not a neutral addition to the care relationship, neither from the perspective of clients and their families nor from the perspective of care staff. This meant that, in many instances, care staff were not recording in real time, using the devices due to the meaning they or clients/family members attributed to the use of the device while providing care. Consequently, the benefits of accuracy and time savings were not being realised.

Care staff and senior leaders of care providers told us that people drawing on care and their family members frequently mistook staff recording care on devices as staff attending to personal matters. Care home senior leaders told us that they received multiple complaints on this issue from clients and relatives. Some senior leaders were able to reassure clients and family members by informing them that care notes had been digitised; however, others felt that the complaints continued despite them having provided explanations on several occasions. One care home senior leader described this as 'demoralising' (Care home senior leader 15), while another particularly struggled due to the confusion caused by their care home having a strict 'no phone policy' (Care home senior leader 17).

The staff member at one home care provider that was experiencing these issues partially attributed them to the culturally diverse client groups they supported. Their experience suggests that consideration must be given to the possibility of people interpreting DSCRs differently depending on their background:

> *Our clients are more like Indian, more Asian. And what they think is that when the care workers [are] using the app, they think that they're spending time on the phone. So […] if they have to update anything on the phone, the clients start having a problem […]: 'Oh, you're spending more time on the phone. You're not doing your work'. […] It's a cultural barrier as well. Like, even if they had [stickers to indicate that they are using the DSCR], the clients would still be questioning the care workers.*
>
> *Care staff member 28*

Some care staff were uncomfortable with recording care in real time as they thought it was rude to use the devices in front of clients. One care home staff member worried that updating the DSCR in front of clients would 'be like I am ignoring them', citing this as the reason she prefers DSCRs with 'tick, tick press' interfaces because they make recording quicker than those that require free text entry. Others thought that the fact the DSCR looks like a mobile phone exacerbates the feeling that they are being 'rude'. They reported that clients are used to staff recording on pen and

paper, while the professional purpose of mobile phones is less clear-cut. One home care staff member described this issue as follows:

> *I'm there to be there for them and care for them and just basically talk to them [...] It's [the DSCR] a blessing and a curse [...] It's good because I can see the last time someone had medication, I can see all the information at a click of a button. But ... it feels slightly ruder to be on your phone doing your notes rather than writing them by hand.*
>
> *Care staff member 14*

Care staff's concerns that they were being rude and their fear that clients would dislike them completing the DSCR in their presence had led to them entering the data away from clients, for example while boiling the kettle in between care tasks, or on clients' doorsteps after each visit. Sometimes home care staff who were concerned about appearing rude felt that the doorstep was the only option available, as for some DSCR systems uploading records away from the house would trigger a 'false sign out'. Where DSCRs that could be completed in another location, staff reported writing up their records on the bus and in the car after leaving their visits. These problems may be particularly acute for care staff who are less proficient with technology, as being slow was perceived as arousing greater suspicion:

> *Some are very fast. So, the people who are slow struggle [...] I guess the client will be watching them. [...] The clients would be suspicious; 'why is the care worker updating on the system? Why is she not, or he not, doing the work?'*
>
> *Care staff member 28*

Aware of this problem, management at one home care provider told care staff to complete the DSCR at the end of their visits to prevent clients worrying that they were taking out their phones for personal use. However, this then led to staff concerns that they would forget the tasks they had carried out, negating some of the benefit of DSCRs. A compounding issue was that many of the home care providers we spoke to were still writing records in the book for clients and relatives alongside completing the DSCR. This was time consuming for care staff on tight schedules travelling between clients. A tactic that care staff struggling with the DSCR used in time-sensitive scenarios involved writing up the completed tasks in the book still kept in clients' homes, but limiting their DSCR notes to signing in and out of the visit. This then led to issues with data accuracy on the DSCR, increasing the workload of office staff who then had to phone care staff to check what had happened during each visit. Recognising the importance of addressing staff confidence and proficiency with technology and client/family understanding, senior leaders reported adopting a range of strategies as outlined earlier in *Chapter 4*.

In contrast to the concerns voiced by staff, the clients and relatives we interviewed, although seldom informed about DSCR implementation, were more ambivalent towards the use of devices. Relatives assumed care staff were using their phones for work because they knew and trusted them. One relative of a home care client was alarmed at the idea of care professionals feeling they had to write their notes on his mother's doorstep. Although the organisation had not informed him about implementation, in theory he said he would prefer the DSCR to be completed after the visit but before leaving the house. As long as the care staff were 'mindful', he did not think typing notes in front of his mother was a problem (Relative 10). This view was similar to that of another relative who recognised that care staff were 'all human beings' and did not think it would be disrespectful for them to use their phones for the DSCR (Relative 11). A relative of a client receiving home care recalled one occasion in which a care professional had used their personal phone while they had nothing to do, but this individual was pulled up by a second staff member (Relative 6).

Clients held similar views to family members; as long as they were receiving high-quality care, clients reported no strong views about staff using the DSCR in front of them:

> *They're on their phones a lot, but they don't neglect the thing [caring]. They only do it once they're, to sit down with five minutes or something.*
>
> *Client 3*

> *I just take it they have to keep records of what they're doing, really. [...] As long as people are replying to me and help me with my needs.*
>
> *Client 4*

People drawing on care reported varying levels of curiosity in the use of devices for DSCRs, from having no interest at all to feeling concerned enough to ask what care staff were doing. One older care home resident reported that she was not curious about the DSCR to the point of 'wanting to know everything about them': 'I really don't think about it as really important, more than anything else. I mean, why worry, I just live for each day' (Client 4). Another thought that some of her fellow residents were not aware enough to notice the devices: 'I don't think a lot of people [residents] here really notice, especially if they have dementia' (Client 3). Despite not being sure what the DSCRs were, some clients also thought it was important for care to be recorded in their presence, as it would improve accuracy and her trust in the information:

> *I think it's good that you see them using them, because they're not going away in a little corner and doing it behind locked doors. […] If they didn't do it until the end of the day, how many things would they forget? […] So, it's not something they're going to forget or make up, hopefully.*
>
> *Client 7*

Some clients had noticed care staff using devices and were interested in them. For example, one client had seen care staff using DSCRs and wondered what they were doing:

> *They're all over just sat down tapping these things, you know, because I know sometimes I say, I hope they're actually working and not doing the football or something […]. [But] I think they wouldn't sit there so brazenly if it wasn't to do with work.*
>
> *Client 7*

Other clients wanted to know what the devices were and directly asked care staff about them:

> *I ended up asking what [the DSCR] was, because I thought a staff member was on their phone and they explained, 'no, it's [a DSCR], that's all that's on here is [the DSCR]'.*
>
> *Care staff member 4*

The clients who had asked about DSCRs were satisfied with the demonstrations and explanations. Once they had discovered what they were, younger clients also reported that they preferred care staff using phones to record notes rather than pen and paper, as they were used to people using technology for daily tasks, as one outreach client described; 'I think it comes to, everyone's got a phone, so like, it just doesn't feel as invasive, I suppose' (Client 1). Instead of being opposed to phones being used during care delivery, clients and relatives more often expressed concern about care staff appearing overworked and teams being understaffed, which could negatively affect their experience of care.

Access to information updated in real time

Instant access to up-to-date information within DSCRs also offered benefits in terms of planning and reassurance for care staff, clients and their families. Care staff in home care found that having access on the DSCR to information about new clients before the first visit helped them to prepare around the needs of each individual. For example, they could quickly review notes to learn a client's likes, dislikes, health information and required tasks. They reported that instant access to the up-to-date information in DSCRs from any location supported personalised care:

> *Very personalised ... We're going in with a little bit of information. I can see that person's had a stroke or has bad eyesight, wears hearing aids. I'm not going in and guessing. I'm going in a little bit forewarned.*
>
> *Care staff member 16*

Prior to the DSCR, staff reported that they would not know how a client was or if they needed anything specific, as they would only see this information in the book kept in the client's home or if a note was left in the office.

In care homes, the feature was thought to be particularly beneficial for agency staff, as they could review residents' digital profiles before starting their shifts, allowing them to be more prepared and aware of any risks or specific needs, ensuring that agency staff could provide high-quality care from the outset. Residents also noticed the benefits of instant access to up-to-date information for planning care delivery and delivering a seamless care experience:

> *I think they [the devices] must be good, because say you've got a doctor's appointment at 9 o'clock in the morning, and you've got to be got up ready […] That comes up on their screen, say at 7 o'clock: 'Mrs. Shaw has got to be showering and bathed by this time because a taxi or someone's going to take her to the hospital'. So, it's telling them all the time.*
>
> *Client 3*

Senior leaders of care providers, in particular, found value in having remote access to up-to-date information within DSCRs as it enabled improved oversight and governance. The DSCRS gave them visibility of all interactions with clients and made it much easier to quickly generate reports on individuals, conditions, or locations by typing a word, meaning issues could be identified swiftly, improving care delivery and informing strategy development. Real-time data allowed senior leaders and other managers to pre-empt problems and take necessary actions before issues escalated. Continuous monitoring and data checking throughout the day, rather than at the end, enhanced overall care management responsiveness. This facilitated better planning and risk mitigation, encouraging senior leaders to think ahead and plan more effectively. Senior leaders reported that, as a consequence, they had experienced time savings related to supervision of care activities, allowing them to focus on other tasks.

Senior leaders also reported that having instant access to up-to-date helped manage relationships with partner organisation and relatives. In home care agencies, the DSCR enabled senior leaders to feel connected rather than disjointed from care work, especially in rural areas. They could share information with relatives, other professionals and ambulance services in real time or close to the time of the visit, without needing to return to the client's residence or wait for staff to return to the office. One participant gave the following example of being contacted by a social worker for 4 weeks' worth of records of visits:

> *I went into the system. It took me five minutes, and they had them in their e-mail, […] back in the day, I'd have to go and find them, scan them, faff about, make sure the staff had written it legibly. […] So, the speed is much, much better.*
>
> *Home care senior leader 6*

Senior leaders also reported that they could immediately collect information for audits or CQC inspections and send it in a protected way, saving time and costs associated with collecting books and folders. One senior leader reported that this improved efficiency had built trust between his care provider, the CQC and LAs, as they could easily access and review necessary information.

Real-time prompts and notifications

Digital social care records are also used to guide care delivery, with the device providing prompts to care staff to follow activities on the care plan for a given individual. The inclusion of prompts and alerts to ensure staff carried out specific activities, such as administering medication, was thought to have enhanced staff safety and accountability. A DSCR with an in-app log-in and out system for lone care staff in home care was reported to improve their safety by recognising if someone had not logged out, which prompted office staff to contact them and ensure their well-being. Senior leaders also noted that DSCRs enabled care staff to learn from mistakes and rectify them quickly. An example given by one care home senior leader was a medication cabinet that was once left open in a resident's bedroom, giving them access to their medication. Following the incident, management could easily create a new form on the DSCR, reminding staff to check they had left the medication locked and secured before leaving the resident's room. This reminder would have been more difficult to add to paper records, as many versions of the same form would have already been printed out or saved on people's desktops. Additionally, senior leaders could use information about non-completion of tasks to identify areas where further training might be required.

Digital social care records also had in-built notification systems for senior leaders to help them respond in real time to incidents or problems. This improved the responsiveness of care providers to client needs and enabled a more proactive approach to management of issues. For example, the alert system on some DSCRs notified staff when care plan reviews were due or overdue, promoting timely updates. Senior leaders found it rewarding when all care plans were up to date, indicated by a 'green' status. These alerts also helped providers with CQC inspections, as it alerted them if a care plan had not been recently reviewed. Home care senior leaders also reported that care staff could log incidents and details and call management through some DSCRs during emergencies. This real-time overview allowed senior leaders and managers to see what had happened immediately and respond promptly.

However, alerts could become overwhelming, creating additional responsibilities and potentially distracting staff from caring activities. For one home care provider, the sudden immediacy and amount of information that the DSCR was sending had created additional responsibilities that added time to management tasks:

> *It's one of those things, isn't it? When you know about it, you gotta do something about it. And […] when you don't know about it, you're not expected to do something about it.*
>
> *Home care senior leader 6*

This participant was struggling to adjust work routines to cope. One relative of a home care client also reported a similar situation for care staff, who she thought were being frequently interrupted by calls and notifications. She thought these often unnecessary, leading to carers spending more time on their phones and finishing notes in what she described as 'my time' (Relative 5). This made her sympathise with the carers, as she thought that someone else should be managing these issues.

Tensions between customisation and standardisation

While it was generally agreed that prompts promoted safer and better-quality care through guiding care staff to follow good practice, there was more debate around whether they promoted person-centred care. This was because participants felt DSCRs varied in the degree to which the prompts could be customised to support more personalised care as opposed to standardised care. One DSCR that allowed a larger degree of customisation and took more of a narrative approach to recording information enabled the creation of individual care plans, which prompted care staff to carry out activities based on clients' preferences:

> *One of them [residents] might like their weight taken every Thursday, [so] we'll personalise it to that person [so the DSCR] gives them a prompt on each day of what they should be looking to do for that resident […] Whereas [our previous DSCR], although it was very visual, you didn't have necessarily that function.*
>
> *Care staff member 5*

Clients whose organisations were using this DSCR were also pleased with how it prompted staff to fit care plans around individual interests and personalities. An outreach client noticed that it helped the staff 'pick up on things' and get to know each client, for example, a care staff member saw on the DSCR that he wanted to do something more sociable and recommended a volunteer group that he now attends weekly. This led him to believe that the DSCR 'almost enables the care to be centred around you' (Client 1). The same sentiment was echoed in home care, with DSCRs that prompted staff for details receiving positive feedback:

> *The tasks are very highlighted and detailed, and [via clients we] give you notes. So, 'This is what I like. This is how you can support me. I like two sugars in my tea … very detailed information on tasks for staff to do and then they […] give more information.*
>
> *Care staff member 21*

By contrast, we heard many examples of how a lack of flexibility in the DSCRs meant recording was suboptimal and likely not supportive of personalised care. For example, one home care client preferred to take her medication if she woke up before the carer arrived, but she struggled with the medication box and often dropped the tablets. At night, the carer sometimes dispensed the medication in advance, but the DSCR lacked a way to accurately record this. The options were limited to 'assisted', which was not entirely accurate, or 'not taken', which was incorrect. Resolving this issue was requiring ongoing liaison with the DSCR supplier.

A further example was inflexibility in the routing, where care staff had to click through options and add information not relevant to the individual:

> *Some of the functions you go through, it'd be like, did you shave that person? But maybe that person doesn't need shaving. It might be a female that doesn't have any facial hair.*
>
> *Care staff member 5*

One DSCR in particular did not fit well with the way care was delivered by a home care agency. For instance, if private clients requested extended visits, care staff could not update the schedule immediately, and, as a result, these visits did not appear on the scheduled visit list. This lack of flexibility made it difficult to make changes and ensure accurate records, as the office manager explained: 'I have to go and check somewhere else to make sure that this has taken place. It's like you can't make changes' (Care staff member 28).

Some relatives had also noticed the impact of standardised routines on care staff's working practices and worried about its impact on the quality of care. A daughter whose mother was receiving home care felt that the DSCR emphasised routines that did not always align with the flexibility needed to deliver care. She worried that the care staff seemed to follow the DSCR like 'a bible' which prevented them from adapting to care needs, such as taking her mother outside on a sunny day or transferring her to the wheelchair if she did not need the commode. Although the daughter was happy with the carers, this was stressful. She highlighted that, 'as digitalisation comes into play, it's got to allow for flexibility, 'cause it's not black and white' (Relative 8).

We heard of one DSCR that allowed care providers to create multiple forms for each task. While this promoted a degree of personalisation in care delivery, as the senior leader conceded, this degree of customisation did not support the utilisation of the data in the DSCR. Allowing customisation by care staff resulted in 17 different forms for the same task. The lack of standardised forms prevented the senior leader from collating statistics for the number of medications administered each month and the number of errors. He had eventually managed to find a balance between flexibility and standardisation by limiting template access to senior leaders only. This example illustrates the difficulty of achieving a balance between customisation to support personalisation and standardisation to enable data to be used to support quality improvement and shared with other organisations. Suppliers were very aware of this tension and discussed it in terms of taking their clients on a 'journey of understanding' in relation to the value of using standardised recording. They described how holding data in a standardised format supports interoperability and, where guidance exists, can ensure organisations are following best practice.

Technical problems and wider infrastructure deficits

Given the importance of real-time recording of care records and access to up-to-date information for realising DSCR benefits, a feature deemed highly important by senior leaders and care staff was the DSCR's ability to function offline in case internet connection was temporarily lost. This feature was seen as central to care delivery because of the frequency of poor internet connectivity across the sector, and the importance of maintaining accurate records that served staff as guides throughout the day.

Some senior leaders were aware of pre-existing internet connectivity issues before adopting DSCRs and actively sought out suppliers that offered offline functionality. There were examples given of this feature working well. One care home senior leader reported that staff could record notes in rooms they knew were Wi-Fi coverage gaps, and the data then automatically uploaded when the DSCR reconnected. A senior healthcare assistant in a nursing home was pleased with the feature and likened it to WhatsApp. Using this feature, they could type messages that they knew would send once their phone was back online. Similar examples surfaced in home care, where the DSCR saved tasks in cache and synchronised them when the internet was available. This meant that if a staff member managed to log out, but the system still showed red alerts for medication, office staff could be confident that the medication tasks had been completed, as the system would not have allowed the care staff member to log out without submitting the task. However, many DSCR systems seemed to rely on stable internet connection to function well, as offline working features were either absent or unreliable.

Where there was not an offline working feature, care staff and senior leaders struggled to communicate with one another and update records in a timely manner, particularly in home care. Care staff at one home care provider complained that they often struggled to connect to data in clients' homes. Since their DSCR did not include an offline working feature, for some visits care staff could not update the DSCR at the point of care delivery. Instead, they would either resort to pen and paper or try to record their notes after the visit when they had found a location with internet. This caused multiple issues, as the office manager explained:

> *Sometimes the clients, the care workers don't have internet. They log in and log out. Alert comes straight away to the office that they haven't logged out. It comes as an alert to say that the call hasn't started on time due to maybe a client didn't have, care worker didn't have internet.*
>
> *Staff member 28*

This meant that she was often working until midnight trying to ring staff to ask why their DSCR was either alerting her that the visit was incomplete or that the care professional had forced a 'false sign out'. While these often indicated that there had been issues with the internet, she had to follow up every alert in case there was a serious issue. The sheer quantity of the alerts was making it difficult for her to identify the ones that may be signalling something more serious.

A senior leader at another home care provider also worried that she was left 'in the darkness' when staff were offline, unable to see how they were getting on while lone working and lacking information about the quality of care delivered. Without offline working, staff at this second provider also experienced communication issues, and sometimes resorted to recording their notes on public transport:

> *I've had situations where carers say, 'Oh I'm writing my notes, but I'm writing it on the bus, because there wasn't any internet in the client's home', and then it says a visit is still ongoing, [but] they've actually left the customer's property […] It really depends on that reliable internet connection, so in areas where there's poor connectivity […] then there is that challenge, which leads to delays or missed information. Yeah, technical failures or system outages can actually cut off access to records.*
>
> *Care staff member 22*

Interestingly, another home care provider that was using the same DSCR reported that it did include an offline working feature. While this does not contradict the importance participants placed on offline working as a feature that should be core to all DSCRs, it does raise the question of the extent to which care staff are aware of the functions available on DSCRs and able to use them.

Internet connectivity problems also occurred in care homes. In one care home, on days when the internet was slow, care staff resorted to recording information on paper. In one organisation where offline working was available but was not functioning well, care staff attributed the issue to poor synchronisation between DSCR devices. While the feature would cache and upload data stored offline on one device, a team leader reported that these data would not update on other devices. This meant that the notes recorded offline were only visible on one DSCR device, forcing care staff to type them out again. Unpredictability around synchronisation was reported elsewhere with some care staff reporting regular delays in syncing information with other devices, which could take up to 5–10 minutes. This issue occurred with both old and new devices, and management had no explanation for it.

Some senior leader stressed the importance of preventing internet connectivity issues where possible to avoid complete reliance on offline working, even if they were satisfied with the feature. While one care home senior leader was happy with their DSCR's ability to function offline for 2 hours, she was still planning to install fibre broadband with the aim of removing internet concerns all together. Another senior leader had implemented continuity and contingency planning to mitigate any potential issues (see *Chapter 4*).

Using reporting and analytical features to improve care quality and safety

Suppliers reported that analytics packages were available, but these were available either as add-ons or through software that was interoperable with the DSCR so represented an additional cost. One supplier noted that the packages were more cost-effective for larger organisations, especially the more flexible options as these required organisations to have in-house analytical support. Consequently, many organisations we interviewed could not afford the analytical software.

Organisations that had purchased the additional software and could pull reports from the DSCR reported enhanced care quality. In one care provider, analysing DSCR data had helped identify and resolve a serious issue where a senior leader had instructed staff not to report medication errors. Spurred on by this, the organisation was now looking to add more technology and was investigating the potential of artificial intelligence (AI) to predict future needs and further facilitate person-centred care. For example, they were hoping AI could scan care plans when prompted and inform staff how each client likes to take their medication.

Organisations that could not afford the additional software for analytics reported that they were struggling to pull reports manually. Manual processes were felt to be highly technical and complex, and involved working with the application programming interface (API) to extract the information for reporting. Even after training, this could be too complicated for senior leaders to do themselves, as one participant humorously noted:

> *You would need some sort of PhD in in like moving something into an API. The day I did it with a colleague […] we were ready to go out in the town after it because our heads were wrecked.*
>
> *Care home senior leader 17*

There also seemed to be a problem accessing historic data on some systems, with some senior leaders reporting only being able to view data from the previous week or month on their DSCR. In order to save a month of data and rotas, one organisation had to manually download them each week before they disappeared. Without these data, it was difficult to monitor and personalise care and demonstrate the value of their work:

> *I don't want to just know how many activities; I want to know how many people have been impacted by that activity. […] If Mary Jones is attending Movement to Music three days a week, every week, every month, it doesn't mean she's actually engaged. […] It just means she goes to everything. […] She could be sound asleep in front of it doing nothing. You know, how do we actually truly measure people's impact?*
>
> *Care home senior leader 17*

Patient and family portal

The patient and family portal, a feature which enables clients and relatives to access and, in some cases, contribute to the DSCR, was rarely used by care providers. There was a lack of awareness among senior leaders about this feature, and, for some, the interview was the first time they had heard about it. While not all DSCR suppliers offer a portal, some senior leaders mistakenly thought that their supplier did not offer it, since they had not been informed about it. Suppliers seemed to think that care providers did not have much interest in this feature, with one supplier citing the family portal as being one of the things they developed that has 'never been utilised because the reality is people don't have that interest'; a reason for this being 'care organisations are absolutely petrified that there will be a slight mistake that's input by one of their care team' (Supplier 1). The same supplier did note that they are 'starting to get a little bit more traction' – a reality reflected in the response of care providers who were disappointed that their supplier had not told them about this feature and were interested in finding out more. While care providers were cautious about using the feature for the reasons the supplier outlines, those care organisations with experience of using the feature were generally positive, as were people who draw on care and family members, with some caveats around accessibility.

Views from senior leaders about adoption of the portal

Where senior managers were aware of the feature, it seemed that DSCR suppliers did not always provide the patient and family portal as part of their standard DSCR. For instance, one home care senior leader that had recently purchased a DSCR had decided against installing this feature since the advanced version they would require was an optional 'add-on' that they would have had to pay extra to install alongside the 'core' functions. Another home care senior leader who had not adopted a DSCR was particularly concerned about this issue, stating that it was 'so wrong' (Home care senior leader 2) that client and relative access to DSCRs seemed to be dependent on the care provider selecting certain features.

Some care providers were either planning to or in the process of implementing the patient and family portal. However, many senior leaders did not feel ready for it and wanted to ensure their care staff were using the DSCR confidently before providing clients and relatives with access. Even care providers that had adopted DSCRs many years ago were yet to, or only in the early stages of, introducing the patient and family portal, despite having installed advanced technology, such as Radar, analytics and fall sensor technology. A primary reason for these reservations was that relatives might become concerned or anxious about the care being delivered, as one senior leader articulated:

> *I think you need to be very careful about and very confident about when you turn it on [because] once you've turned it on, you cannot turn it off. […] You don't want them [relatives] accessing incomplete or poor records because that can create anxieties. […], we will use it, but we have to use it at the right time.*
>
> *Care home senior leader 18*

Linked to this was the concern that relatives might constantly check the portal and become obsessive over it. Some senior leaders worried that this may create additional administration tasks and challenging dynamics between staff and family members. One care home senior leader thought that live updating could worry relatives, for example if they saw that a resident had a fall before a staff member had informed them about what had happened. Concerns like this needed to be carefully managed as a supplier described:

> *So, one of the pilot locations for that piece of functionality, there was a family member that if their mother hadn't … if she had scheduled 2:00 PM for a drink and it was five past two and it still hadn't been recorded, she'd be on the phone and it was kind of almost encouraging the wrong kinds of behaviour from loved ones really.*
>
> *Supplier 1*

Other concerns over providing relatives access included data security, and many senior leaders thought that the patient and family portal should be carefully considered with permissions dependent on individual circumstances. One care home senior leader who was preparing to adopt a DSCR said she would not trust many family members with access to a portal, a concern which she captured with the phrase 'where there's a will, there's a relative' (Care home senior leader 14). Her apprehension was linked to previous experiences of some relatives physically abusing clients in her care. Another senior leader in a care home franchise currently trialling the portal was against providing blanket access for all relatives, in case residents held different views about what their families should see. She described the area as complex, stating that 'just because they are a family member doesn't mean they have the right to see private information' (Care home senior leader17). The way they were approaching the issue was to base what relatives could access in the portal on the type of resident. For most relatives, they were planning to provide access to activities and photos only. However, where care was becoming palliative, they understood that the family may want to receive more information via the portal rather than having to phone the busy care home, for example to see if their loved one had seen a doctor that day.

Other senior leaders thought that the patient and family portal was not always appropriate, considering the conditions and older age of the clients and relatives they usually supported. A care professional at a respite, residential and outreach service said that many of her clients are non-verbal or older, characteristics which she thought would hinder access to the patient and family portal were the organisation to install it.

Views of people drawing on care and their relatives about adopting the portal

In care providers where the patient and family portal had not been installed, clients and relatives themselves were generally open to the idea of the feature. In these providers, no clients or relatives were aware of the patient and family portal before the interview. When it was explained to them, relatives liked the thought of being able to see information instantaneously rather than waiting to receive a phone call, as one relative whose mother was receiving home care described:

> *The notes they make of when they're looking after the patient, […] if they find anything new, sort of issues on the body[…] they can register it, so at least instead of talking later or putting on the phone and […], it will be there straight away.*
>
> *Relative 11*

A son whose mother was receiving home care from the same provider was also interested in the patient and family portal. He thought it could facilitate direct, two-way communication between clients, families and care staff, which would eliminate the need for him to ring the office and ask where the care staff were if they were late to the visit. He said he would like a portal to include notifications that the staff member had come and gone, and notes of any tasks or concerns, such as his mother reporting stomachache. He would also like to leave digital notes for the care staff on the portal rather than having to leave physical notes in the house, for example to let them know that his mother was not feeling well, or whether the family had left food in the fridge.

Clients in care homes were generally happy with the way they received information. Some were able to contribute to their care plans without accessing the patient and family portal, for example via care staff going through their care plan with them every 6 months, or by going to the nursing station to ask for updates or changes to be made. While some were ambivalent about the prospect of a portal, none were opposed to it, and one older client thought it would be nice if her relatives could see any problems that had arisen, for instance if she had slept badly one night. Younger clients were excited by the concept of a portal, especially as they saw it holding the potential to increase loved ones' visibility of their care. One outreach client contemplated this while the portal was explained to him:

> *Client 1: That would be nice, because my mum would have an inkling then. She was put down as my next of kin. So, the patient and family portal, that means I could see my care plan or my psychiatrist report?*
> *Interviewer: Exactly, yeah, and you could choose what your family members had access to. So, say you didn't want your mum to see certain things…*
>
> *Client 1: Yeah, that sounds like an idea.*

A respite client held similar views and thought that the patient and family portal would enable her mother to look out for her. He imagined a personalised portal accessible to relatives and care staff, entitled 'Harry's portal' (Client 1). Rather than wanting medical information to remain private, this participant instead saw the portal as a way for sensitive information that was difficult for her to share herself to be communicated to relatives:

> *Interviewer: If your family, like say your mum, had her own login maybe she would be able to see, like Ellie had her medication today or Ellie had breakfast this morning at this time, but she wouldn't be able to see maybe the wound chart…*
> *Client 9: […] For me, because of my condition … I want mum to see the more serious kind of stuff that I probably wouldn't tell on the phone so she should be ringing me and be like 'I've seen this, are you okay?…', instead of […] her seeing breakfast or not because I can tell [her] that myself.*

This sentiment was reflected in another interview with a relative of a person receiving home care who thought that it might be easier for her to access information via the DSCR, as her husband's dementia made him forgetful, and she did not think husbands like to tell their wives about their health issues. Although many home care clients were older, they also expressed an interest in the patient and family portal, describing it as an opportunity to learn new things. Some were also confident that their younger, more 'tech-savvy' family members could help them to use it.

Experiences of using the portal within care organisations

Those care providers that had installed the patient and family portal reported that it was mainly used by family members rather than clients. Providers usually enabled access to records, but not the option to change or update them. Some providers only provided access where people requested it. In home care, relatives reported using the portal to look at notes made by care staff during visits, the care plan, medications needed by their loved one, and an advance view of the rota. It sometimes included a function for relatives to be able to state their preferences about which staff visit the home or not. It was common for the portal to be used to share photos with family members. A small number of home care providers had patient and family portals which enabled two-way messaging with care staff, which was appreciated by family members.

Despite concerns expressed by providers not using the feature, those who had installed the patient and family portal received mainly positive feedback from relatives and clients. One relative of a person receiving home care used the

portal to occasionally check what the care staff had written, especially if something different had been done during a visit. This participant was impressed with how things were recorded, particularly regarding the language used, which they felt was discreet, factual and limited to necessary information. Another relative liked that he could see when the hairdresser or chiropodist had come to the nursing home to see his wife:

> *I've not looked at it for a while, but I've just got a general picture of what Gladys requires. It's just not left to me to orchestrate these things, and I was really pleased with that.*
>
> *Relative 2*

Some staff and one relative also felt that it offered relatives who lived far from their loved ones the ability to stay up to date on their care and who was supporting them. A senior leader remembered an occasion where a relative brought their loved one a TV after seeing in their notes, via the portal, that they wanted one. Although there were concerns from some providers without the portal that relatives might worry about seeing incidents on the portal before staff could ring them, other senior leaders with the portal reported that relatives felt reassured that they could access information, such as falls, immediately via the DSCR and it gave them 'peace of mind' seeing that everything was thoroughly recorded. Several relatives of home care clients mentioned that real-time access to information was a marked improvement over the previous system, where rotas were done on paper and often became outdated quickly. The portal also gave care staff the opportunity to update notes based on feedback from relatives:

> *They do call [...] which is quite good, [...] if some information were incorrect, [...], we can update it.*
>
> *Care staff member 2*

Reflecting this sentiment, a home care senior leader welcomed the greater accountability remote access by relatives brought, feeling it would ultimately benefit the clients.

There were some problems, as one care professional recalled, in a previous role, some relatives had constantly rung the care home when the portal was not immediately updated. Relatives of home care clients also mentioned the issue of the timeliness of updates, especially when carers or rotas changed. In one instance, one sister of a care recipient felt strongly about the need for timely updates, while another was less concerned as she thought that slow updates were a result of the inherent unpredictability of care provision. Although the office usually called if a care staff member was more than 15 minutes late, the inconsistency in updates remained a concern. Changes in rotas could also be frustrating for relatives. While rotas were done 3–4 weeks in advance, unexpected changes could require relatives to check the system frequently, which was time-consuming and inconvenient compared to the previous e-mail notifications. Incorrect information was also a problem, with one relative noting that care staff frequently made spelling mistakes and misused words in the records, which sometimes made the notes difficult to understand. An outreach client also noted outdated or irrelevant information on their DSCR about weekly money that was now received fortnightly. She thought this outdated information could confuse new staff who were not aware of her current situation, highlighting the need for regular updates to ensure the accuracy of her records.

In general, however, the relatives we interviewed reported that they trusted the care being delivered and did not feel the need to regularly open the portal. One relative of someone receiving home care thought that this was partly because she sees her loved one often, while others living further away might be inclined to use the portal more frequently. Irregular usage might also be linked to cost implications of the portal for clients and relatives. Two portals in home care only allowed one relative to create a login, and any additional user accounts incurred an additional charge. One relative thought it was possible to circumnavigate this issue by allowing other relatives to access the portal using her login, but she had not attempted this workaround. Although she was not opposed to the portal, the same participant recalled that she was not given the opportunity to ask questions when it was introduced, with the message from the home care provider being 'this is the way everything is going'. She did not mind the portal and used it occasionally, although she thought that it had been easier to access records when they were paper-based, as she still did not understand some of the icons on the DSCR. She admitted that she checked the portal partly to feel like the family was 'getting what they were paying for' from the care provider. Accessibility concerns are explored further in *Chapter 6*.

Care providers with the patient and family portal did not report any issues with confidentiality or data protection. To mitigate risks, senior leaders and staff were careful about granting access to relatives and updated permissions based on clients' consent. Communication and training were highlighted as helping clients and relatives to understand and use the portal effectively (see *Training for everyone who will use the digital social care records* in *Chapter 4*).

Interoperability of systems and sharing data beyond the provider

The Institute for Electrical and Electronics Engineering defines interoperability as 'the ability of two or more systems or components to exchange information and to use the information that has been exchanged'.[42] This is different from health information exchange, which only requires an ability to share information electronically. The receiving system does not need to understand and interpret the data being transferred. True (or semantic) interoperability ensures each system has the ability to understand the information received from others without ambiguity, enabling the shared information to be used.[43] Participants describe both digital information exchange and true interoperability, with different systems in use by the care provider and with systems of partnering organisations, and in all cases highlight benefits accruing from interoperability and disbenefits where there is none.

Interoperability of digital systems for care with the digital social care record

The level of interoperability varied substantially between care providers, with those who had been using DSCRs for longer generally more likely to have in place a higher number of systems that were compatible with the DSCR, as one senior leader stated:

> *A lot of homes maybe did not have anything in place [prior to a DSCR]. So, their focus was [...] just do this digital care planning, whereas we had it [DSCR] in place; [so] it was, what else could we add to [...] make it work better?*
>
> *Care home senior leader 4*

Long-standing users argued that the benefits from DSCRs accrue when 'you start linking all these [digital] systems together' (Care home senior leader 4). This culminates in care providers having one seamless system where programmes can 'speak to' one another: 'your audit becomes much more robust and [there is] just much more value' (Care home senior leader 4). Other senior leaders were happy that it felt like data were 'all in one place', along with the real-time data sharing and visibility that were facilitated by interoperable systems.

Experiences also seemed to depend on the way technology suppliers approached interoperability. Some DSCRs had an open backend which enabled software from other suppliers to connect to the system. Other suppliers had acquired software that offered a digital solution for other functions and offered the software as packages that could be added onto the DSCR for an additional cost. The latter was praised by one care home senior leader who was satisfied that she could ring the same supplier for support with her DSCR, eMAR, and digital reception systems. However, some senior leaders were not happy to find that software from other suppliers could not connect to the DSCR system they had purchased. For example, one care home had purchased an eMAR that was owned by a different supplier and was not compatible with their DSCR. The deputy manager of another care home suspected that management had switched to a DSCR with an 'open backend' due to problems with information in the eMAR system that was part of their previous DSCR, which 'wasn't correct at the right time' (Care staff member 5).

At the level of care delivery, care staff had positive experiences where DSCRs were interoperable with other systems. This usually made it easier to share information with CQC, GPs and other professionals such as district nurses and paramedics. Staff also found eMAR systems that integrated with the DSCR saved time when dispensing medications. In one care home, care staff were pleased that call bells, which rang if a resident pulled a cord, were now integrated with their DSCR devices, meaning that they no longer needed to carry chunky pagers around as well as the DSCRs. Another nursing home had installed Nobi lamps, which were lighting fixtures that alerted care staff to falls through integration with the DSCR.

One problem noted was the lack of interoperability between DSCR systems due to supplier competition. One home care senior leader was frustrated that different DSCRs were not interoperable with one another, with data lost if a client

switched between care providers that used different DSCRs. Additionally, already noted it was not straightforward for care providers to switch suppliers and problems could arise around sharing data between care providers.

Interoperability of digital social care records with healthcare systems and other care providers

Where DSCR systems were interoperable with other systems used by partner organisations, this was seen as beneficial. For example, GP Connect was available with some DSCRs, which enabled, with client consent, senior leaders to access GP records on a view-only basis for information on diagnosis history, referrals and ordering medication. This reduced the need for lengthy phone calls, as records could be checked and shared directly between professionals. Care providers that were not using GP Connect found it frustrating having to print and scan records to send them to GPs electronically.

Many senior leaders expressed a desire to work more closely with the NHS and saw the NHS sharing data with social care providers as key to achieving closer working. For example, one home care senior leader believed that sharing data with GPs would be more beneficial for her work than the other way around. Another senior leader was excited about an initiative their DSCR supplier had initiated around making DSCRs interoperable with hospital records, which would enable health and social care to use the same care and support plan. Some highlighted the idea of hospital passports fully interoperable with the DSCR as a way that both health and social care could benefit from each other's data:

> *It'd be great if we could have something where you could say right. Here's a hospital passport. We could just ping it straight into a system at the NHS. […] Because what happens at the moment is […] I've got the digital record [but the hospital doesn't]. So, you still need a paper copy. [...] it'd be far better if people could have information sent to the NHS or to the GP or other places like that. And it's not paper.*
>
> *Home care senior leader 6*

Digitally sending hospital passports directly to the NHS, rather than printing them, would prevent the common issue of these documents getting lost. Additionally, it would enable hospitals to alert care providers via the DSCR when residents were discharged.

Some concerns were voiced, however, about the direction of data sharing and interoperability between health and social care. Many felt that social care was often 'forgotten' when it came to data sharing. The benefits seemed one-sided, with the data being shared benefitting the NHS but not social care. One care home senior leader felt pressured to share data as it was 'the way to go whether we like it or not' (Care home senior leader 15). Related to this issue was the Shared Care Record. Senior leaders rarely knew about this, but those who did often doubted it would successfully link health and social care data:

> *They've been developing that for 10 years. So, I don't think it'll ever happen. […] In theory they want … is for all care homes to have the same system, but unless someone's paying for it, no private company is going to go with what someone says.*
>
> *Care home senior leader 7*

The issue of competition between care providers was also mentioned. Some senior leaders thought that data sharing was simpler for the NHS as a single organisation, while the social care landscape is filled with different providers who are more wary of sharing data as they compete for clients.

Clients' and relatives' perspectives on interoperability

Clients and relatives were less aware of which software was used by care providers and the extent to which they were interoperable with one another. Clients and relatives sometimes knew of GP Connect and were aware that the DSCRs were used for medication administration but did not realise that this was co-ordinated by a separate eMAR system. One care home resident thought that it was the DSCR that alerted staff when she fell out of bed one night, even though call bells were not integrated with the DSCR in that particular home. Another resident thought that information was stored in individual DSCR devices that were physically passed on in handover meetings, rather than data stored in a cloud that could be accessed from multiple devices. Despite not being fully aware of how information was stored, accessed or shared across programs, clients and relatives were generally happy with their information being recorded and shared, trusting that it was for their safety and well -being, as two residents articulated:

> *I haven't noticed [people sharing my data], but it wouldn't worry me because that's their job, and I would expect someone to make a report on their visit and that would be logged and I've got no problem with that at all.*
>
> *Client 9*

> *Some people will say you've got no privacy. Perhaps you haven't. But at this age, you need looking after. […] So, I personally have nothing against them writing down what we've done and where we've been and all that.*
>
> *Client 7*

One client in a respite service reported a positive experience with software that analyses facial expressions to determine whether someone is in pain, which was interoperable with her care provider's DSCR. She had noticed that fellow residents who were non-verbal communicated their pain via agitated movements that were not always picked up by care staff without accessing the software. She found this technology helpful for reporting her own mental pain, which she thought was important for giving care staff a holistic picture of her well-being. This experience is an example of how the DSCRs acting as a single sign-on for interoperable technology improved the care experience for clients and helped them to feel seen by those supporting them.

Features perceived to be missing

One feature that senior leaders and care staff reported as lacking in their DSCRs was the ability to electronically sign documents. In one care home, this issue was flagged by a CQC inspector, who picked up that relatives could not sign the digital care plan to confirm that they had been involved. The senior leader interviewed believed that if the documents were still paper-based, this evidencing issue would have been more obvious to the staff. Care staff worked around this problem by taking pictures of handwritten signatures, scanning them into the computer and sending them to the DSCR as a PDF document, which was a long-winded, time-consuming process. The solution recommended by participants was to include an option for people to digitally sign directly on the DSCR, otherwise known as e-signing. While participants in one care home had reported problems with signatures to their DSCR supplier and were told they were working on resolving the issue, we are not aware of a DSCR that currently incorporates an adequate e-signing feature.

Chapter 6 Experiences of digital social care records by people from different social categories

Members of the public and other stakeholders who were involved in guiding this project were particularly concerned that digitisation may further exclude already marginalised groups of people and exacerbate existing problems in the sector, for example around workforce supply and working conditions. In this chapter, we explore the experience and consequences of DSCR implementation for people in different social categories. We focus particularly on whether, why and how experiences differ for people in different social categories, whether there are implications for the extent to which benefits are realised and whether steps have been taken to redress any inequalities arising.

Differences in experiences related to proficiency in English

Care staff from different ethnic minority backgrounds felt that language barriers could prevent staff from understanding DSCRs. There were also additional needs for training for staff whose first language was not English. As one office manager put it:

> *It's because of the language barrier […] They're going for all the training. It's all like practical, but when it comes to [the] written version, they're really struggling with that.*
>
> *Staff member 28*

In this care provider, the DSCR supplier had delivered the staff a workshop and then office management had been left to complete the training themselves. Both senior leaders and the care staff we interviewed did not deem this to be sufficient. Despite the hours she had spent going through the DSCR with care staff, one office manager felt that the system was too complicated for staff with lower levels of English to understand. For example, one international care professional reported that she still struggled with all the buttons she had to press on the DSCR to navigate the care record. Although this care provider had not installed the Patient and Family Portal, clients and relatives using the service also told us that they thought language would be a barrier for them or others to understand the DSCR. These issues raise the question as to whether some DSCRs are appropriate for people with a certain level of English, as well as the extent to which suppliers may need to customise training for specialised care providers. As discussed in *Chapter 5*, it may be the case that a translation feature, or the availability of DSCR templates in languages other than English, may support international staff and clients to use the system more effectively.

While complex user interfaces that required a good level of English made it difficult for non-native English speakers to engage with DSCRs, systems with icon-driven interfaces were found to be more accessible:

> *[The old DSCR] for us was very visually inviting, so lots of easy icons that you can press on to indicate, so for staff that maybe don't speak great English or that might need a prompt, the visual aspect is really good […]. [The new DSCR] is not so kind in that aspect*
>
> *Care staff member 5*

One care home senior leader discussed the utility of prompts and icons in comparison to a paper-based home in which she had previously worked. At the paper-based home, international staff often shied away from note taking, which led to care being recorded by care staff who were more comfortable writing in English. However, in her current care home utilising a DSCR, she noticed that the choice between pre-set options and free writing had encouraged international care staff to record notes themselves. She felt that this had improved the amount of information captured and, in turn, the quality of care delivered.

As discussed in *Chapter 5*, staff also highlighted predictive text and autocorrection as a useful feature that could improve their written English where needed. Some senior leaders also thought that DSCRs supported staff with dyslexia

to record care. Nevertheless, staff highlighted that it was still important to check care notes rather than relying solely on the technology.

Supporting more personalised care for people with changing circumstances and specific preferences

We encountered some instances of DSCRs supporting personalised care for people with changing circumstances and specific preferences. At a respite, residential and outreach service, a senior leader told us that their DSCR had supported the correct pronoun usage for a trans client who had chosen to change their gender pronouns. Following the client's transition, some staff had been struggling to remember to use the correct pronouns. However, once they had been updated on the DSCR, staff quickly started to apply the correct terminology as they were consistently reading 'she/her' on the care plan. The senior leader thought that being able to immediately update care records for all staff was a significant benefit of DSCRs in this case.

The same features within DSCRs also supported staff to remember people's particular preferences, as we discussed in *Chapter 5*. In this vein, a senior leader at another care provider reported that the DSCR made it easier to record and access clients' preferences for care related to their religious and cultural needs.

Reduced access for people with some health conditions

There were concerns about DSCRs making care records less accessible for certain groups of people. It was reported that people with medical conditions affecting the use of fingers and hands may struggle to access digital records as their limited dexterity meant it was difficult to use 'small and fiddly' mobile phones (Relative 5). Poor eyesight was another condition affecting access. This was also a problem for one home care professional, who explained that when she forgets her glasses in a visit, she could not read the text on the DSCR and sometimes clicks on the wrong client. For this reason, some care staff preferred to read documents on paper rather than screens.

Interview participants had a range of ideas to navigate these challenges. People with poor eyesight reported that a large text or easy-read function would support them to engage with a DSCR, as well as making the DSCR available on devices with larger screens, such as tablets, laptops and desktop computers. Meanwhile, a client who was concerned that her reading ability would prevent her from accessing a Patient and Family Portal thought that a Read Aloud option would help her to overcome this barrier. Thinking about accessibility more generally, a home care co-ordinator envisioned DSCRs that were 'more colourful' and 'fun to use' (Care staff member 21).

Familiarity with and access to technology

Familiarity with and previous experience of technology varied substantially among the participants in this study. Some managers reported that most of their staff had experience with some form of digital working, such as using digital systems for rotas/rostering, digital payslips or by using Microsoft Office software to complete documentation. Several care staff reported knowing and using DSCRs or similar technologies in other work contexts which made it easier for them to get used to DSCR devices and systems. This also included international workers, some of whom had started working in the UK recently. Others reported being able to transfer skills learnt from using smartphones or computers in other contexts. While many said that they felt confident in being able to use or to learn how to use DSCRs easily, for some DSCRs felt completely new and scary.

Both senior leaders and care staff reported that people less familiar with technology found it harder to learn how to use a DSCR. Familiarity with technology tended to be associated with age, with older staff less likely to be familiar and therefore confident, as illustrated in the below comments:

> *For the younger generation it's easier [...] We've got [older generation] care workers who have been working for years and years with us. You see, for them it's a very big transition from completely stopping paperwork.*
>
> *Care staff member 28*

> *For the older generation it was a bit more difficult. But I believe now everyone is pretty good at it. […] They were not against it. It was just a bit strange to change to something brand new from what they used to already before.*
>
> *Care staff member 23*

In general, older people were more accustomed to pen and paper, which could make them more apprehensive about going digital. This meant that it could take longer for them to adapt to the associated changes than for younger staff members. In some cases, this apprehension was severe. However, both senior leaders and care staff were generally confident that, with the right support, age and familiarity with technology did not need to pose significant barriers to implementation. As mentioned in *Chapter 4*, adequate training was highlighted as a key facilitator that built staff confidence and helped allay any fears about the DSCR being too complicated for them to learn. Indeed, a care staff member who had been concerned about adopting DSCRs reported that the support and training she received was 'brilliant', and she felt she could ask questions without feeling embarrassed (Care staff member 11). She had since become comfortable using the DSCR and thought it was better than using paper records. Staff also mentioned that keeping the user interface as simple as possible would help to avoid staff less experienced with technology from taking a long time to complete records.

People drawing on care also raised concerns about familiarity with technology and access to a digital devices being a barrier to them being able to fully engage with DSCRs. While one older care home resident regularly used digital technology, he thought that he was an exception among his peers:

> *The trouble is […] 80% of the residents here don't have access to any computerisation. I lunch with three guys […] all a bit older, they don't have access, I think one has an iPhone [...] but they hardly ever use it. The other two don't have a clue. So, you can't expect them to have anything like that on digital records […]. It's useless to them because they've got no means of accessing it.*
>
> *Client 9*

These concerns were echoed by relatives of people drawing on care. One interview participant whose father is receiving home care thought that there is a risk of older people becoming excluded from care services because they lack the experience or confidence to use digital records:

> *They do not have the confidence to do anything like have a smartphone […]. So, I think anything that can be done to do some form of training, or make something easy for them to do, rather than sort of roll out digitalisation across the whole board, because it's not going to work […] it's gonna miss a group of people who need it the most.*
>
> *Relative 8*

Some senior leaders and care staff also felt that the older age of their clients and the conditions affecting them meant that they were not the ideal user group to be introduced to new technology. However, clients and relatives were generally open to the idea of DSCRs so long as they felt supported in accessing records. High-quality training was frequently cited to address accessibility issues, although there was less agreement about the nature of the training, suggesting that multiple options may be important. One relative thought a YouTube (YouTube, LLC, San Bruno, CA, USA) video about how to use the portal would be sufficient for him, while a client said she enjoyed learning new things and would like to attend a course on how to use the DSCR. Another client thought that face-to-face training at home or via video call would be the best way to learn.

Ethics and keeping people informed about how their data are used

Our interviews surfaced a degree of confusion among people drawing on care about DSCRs and raised important questions about the client's right to view their care record and be informed about how their data are being used. Many

clients were unsure if they had been informed about DSCR implementation and did not know what DSCRs were or how they worked. One resident had vaguely presumed that staff were watching him through the wall as they seemed to know his updates instantaneously:

> *There are records about me, and I've heard of, yes. […] I've always assumed that there are spy holes in this room here looking out.*
>
> *Client 12*

While many had not seen staff using the DSCRs, some residents had noticed care staff using a device. However, they were not sure about its purpose:

> *I suppose they've always got them [the devices] with them. And if they're sat down, they're playing with them, as I say, working and filling them in or something.*
>
> *Client 7*

Despite the lack of clarity, clients and relatives generally presumed that the purpose of DSCRs was to help staff deliver care. One resident had reached this conclusion from the way that updates about her well-being seemed to be shared across the devices:

> *Once I just slipped in the bathroom, […] but the next morning when [the day shift] came in to see me, they said 'Are you alright Gladys? You've not got anything wrong after your fall?' So, they knew straight away that I had fallen, so I take it the information is passed on immediately.*
>
> *Client 5*

Clients who knew more about DSCRs had usually gained this information from taking the initiative to ask about them at some point.

Despite liking the idea of being able to see what was being recorded on the devices, some clients who remained unsure had not asked because they thought that the request may be received negatively, as one resident explained:

> *I hope they think I was, you know, okay. Not making waves or being awkward, you know. […] Probably if I was, you know, interested to know, [I could ask to see the device.]*
>
> *Client 4*

Many clients were under the impression that the information was not shared or that access was reserved for care staff only. For example, one care home resident thought that the information on the DSCR was 'private, but between the nurse and me, that sort of thing' (Client 10). As well as confusion about who could access information on the DSCR, older clients often lacked understanding about what was stored on the devices. Some incorrectly assumed that the DSCR did not include their personal data, as expressed by the following participant:

> *They don't record anything personal, so you don't need to worry about that. […] I don't suppose they've got your address on those things.*
>
> *Client 5*

As well as feeling unsure about what was on their records and whether they could view them, many older clients and relatives were also oblivious to the potential security risks associated with online data storage, such as hacking and scamming. Some thought that their data were 'boring' and not of interest to potential hackers. This sentiment was expressed by a number of participants, despite some having previously been victims of scams:

> *It can't be that important. I'm not an important person. I've got nothing to hide I shouldn't think […]. No, I'm not bothered.*
>
> *Client 8*

> *I've been hacked once before I came in here. You know, where they took money, but I got it back. But, yeah, I don't think about hacking here, particularly.*
>
> *Client 3*

> *I'm not into technology, you know what I mean? I mean, if things get hacked about me, well, I'm a very boring person, probably.*
>
> *Client 4*

Another older care home resident had been scammed the same morning as the interview but remained unconcerned about the safety of her data in the DSCR. She appeared to lack an understanding of how leaked data can be used to scam vulnerable people and instead saw hacking and scamming as unrelated issues.

Although one care home resident noted that DSCRs in the hands of the wrong person would be a potential negative consequence, in general their trust in the staff delivering their care often led clients to trust the DSCR without feeling the need to ask about it or harbour concerns about the security of their personal data. What usually mattered most to them was the quality of care they received:

> *Just people that look after you, don't abuse you, and if you need help, they help […] There's people that haven't got relations, so they're completely reliant on the staff here.*
>
> *Client 7*

However, where the DSCR was left unexplained, it was difficult for clients and relatives to fully understand potential security risks. This raises ethical questions about how people's rights around access to their data should be communicated, and who has the responsibility to inform them of their rights.

Chapter 7 The financial and economic case for digital social care record adoption

In *Chapter 3* we explored how care providers in this study made decisions about adoption of DSCRs, and the extent to which economic and financial considerations were part of the decision-making process. In this chapter, we start to set out the economic case for DSCR adoption, drawing on the accounts of participants in this project. We outline the categories of costs and benefits of adoption in a qualitative manner, setting out cost estimates (where these were available to us), the domains of outputs and outcomes and factors that influence the variability of the costs and likelihood that benefits are realised. We also outline in a narrative form what is likely to be the strongest financial and economic case for DSCRs and the likely time horizon for realisation of benefits from DSCR adoption. The intention is that in documenting costs, outputs and outcomes in this manner we can support organisations to understand the nature of the investment better and provide a structure for future quantitative investigation of the economic case for DSCR adoption.

Costs of implementing and running digital social care records to providers

To help care providers understand the likely costs of adoption and to plan for adoption, we have identified five categories of cost:

- *Hardware*, including portable devices and other devices for accessing the DSCRs
- *Software*, including the DSCR and other software the supports the DSCR's functionality and/or security
- *Infrastructure* that is necessary for the functioning of digital devices
- *Training and implementation support* to ensure set-up is correct and staff are competent users of DSCRs
- *Management and administrative activities* to support the successful implementation and ongoing use of DSCRs for care delivery.

Costs under each of these categories are outlined in *Table 5* and we have noted whether costs are upfront or recurrent and have provided estimates (2024 prices) where these were available from care providers. The main areas of variation in costs relate to:

- size of the business: Costs for the software usually grow proportionally in line with the size of the business. Some additional features are not designed for smaller businesses, and larger businesses tend to have access to in-house IT support and project management support
- type of provider: Care homes require an investment in portable devices and Wi-Fi infrastructure of an order not reported by home care providers
- choice of DSCR supplier: Products vary in the features available, and subscription pricing models
- current operations and location of the provider: features relating to the way delivery is organised, local IT infrastructure and degree to which the provider utilises IT systems already all have a bearing on the level of investment required to get started with DSCRs.

An important point for care providers to recognise is that investments in hardware are not one-off investments. These assets can be lost, suffer from wear and tear, may break and like all electronic products need upgrading regularly. We make this point as there was evidence from the analysis of one of the business cases we reviewed that care providers were not necessarily giving asset loss and damage full consideration in making financial decisions on DSCR expenditure. Although the business case acknowledged that there would be a cost associated with repairs, replacements, and warranties for purchased rather than rented devices, the options appraisal did not price in the risk of asset damage, loss and replacement, and so tended towards overoptimistic conclusions about the likely savings from purchasing rather than renting devices. Lifespans for these assets are fairly short. One supplier stated they replace all devices on a 4-yearly basis. We did not gather information about the likely rates of loss and breakage, and these are likely to vary

TABLE 5 Cost categories of DSCR implementation and utilisation

Category	Item	Type of cost	Cost estimate (2024 prices) and notes on the cost
Hardware	Handsets	Upfront and recurrent cost due to loss, wear and breakage	Estimation of £500 per handset (by provider), but this will vary depending on the choice of handset. Suppliers recommend business-based solutions with longer lifespans than consumer-based devices. Providers need to have enough handsets for all staff on shift, and more to ensure there are spares and sufficient handsets when charging is taking place if the devices do not have replacement batteries. Devices are a large initial outlay, but also an ongoing cost due to loss and breakage. Estimation of £25 per handset repair (by provider), but replacement would be the full cost of handset. Handsets can be purchased or rented and suppliers have different pricing structures. Rental is charged as an ongoing monthly fee in addition to the user licence. Packages will include management of the assets (see security management), free replacement for loss or breakage, and replacement of all devices when upgrades are due. Handsets are required only for staff working on the floor of the care home. Senior leaders will utilise PCs/laptops. Additionally, home care providers are unlikely to be purchasing devices; rather they expect care staff to use mobile phones, although some agencies may provide phones to staff.
	PC and laptops	Upfront and recurrent cost due to wear and breakage	PC/laptop is required for management and office-based staff to access the DSCRs. Often care providers already have a PC/laptop but this is not always the case.
	Docking/charging stations for devices	Upfront and recurrent costs due to wear, upgrades and breakage	Estimation of £180 per charging rack (by provider), but this will vary depending on the choice of handset and whether the handset needs charging or whether batteries can be charged separately.
	Protection for devices	Upfront and recurrent cost due to wear, upgrades and loss	This included items like screen protectors and cases. Estimation of £100 per device (by provider)
Software	Subscription fee for software	Recurrent cost	Suppliers used different pricing models for purchasing the software and could offer a monthly or annual subscription fee with different contract periods. Subscription fees often scaled in line with the size of the business, with models of per bed (for care homes) and per hour of care provided (for home care agencies), although care providers also reported a per user licencing model. What was included in the basic subscription fee varied by supplier (see additional features).
	Additional software features	Recurrent cost	Suppliers have different features that are part of the basic and optional packages. In general, optional features are an additional amount on the subscription fee. Introduction of some features may incur additional upfront costs, for example for analytics packages. Care providers reported needing to pay for data to be linked.
	Anti-virus software	Recurrent cost	Costs depend on the solution purchased.
Infrastructure	Internet access/ Wi-Fi boosters	Upfront cost and recurrent cost for internet	Care providers reported they often needed to upgrade their Wi-Fi package or purchase Wi-Fi boosters to ensure connectivity across the care home. For home care, they reported needing to purchase 5G SIM cards to ensure sufficient internet speeds for data use.
	Plug sockets	Upfront cost	Care home providers reported needing to install more plug sockets for charging stations because extension leads were not permitted.

continued

TABLE 5 Cost categories of DSCR implementation and utilisation (*continued*)

Category	Item	Type of cost	Cost estimate (2024 prices) and notes on the cost
Training and implementation support	Initial training for management	Upfront cost	Depends on whether training is delivered in-house or sourced from the supplier as to cost, although as noted generally management training is delivered by the supplier. All training will include cost of management staff to attend training/cost of any backfill to allow staff to attend training within work hours.
	Initial training for staff	Upfront cost	Depends on whether training is delivered in-house or sourced from the supplier as to cost. In-house includes cost of staff time to deliver training. All training will include cost of staff to attend training/cost of any backfill to allow staff to attend training within work hours.
	Training for new starters	Recurrent cost	Depends on whether training is delivered in-house or sourced from the supplier as to cost. In-house includes cost of staff time to deliver training and cost of new starter attending training.
	Additional training for staff	Recurrent cost	Depends on whether training is delivered in-house or sourced from the supplier as to cost. In-house includes cost of staff time to deliver training. All training will include cost of staff to attend training/cost of any backfill to allow staff to attend training within work hours.
	Cyber security/ digital awareness training	Recurrent cost	Depends on whether training is delivered in-house or sourced from a third party. This would cover responsibilities under GDPR legislation and general cyber security.
	Implementation support	Upfront cost	Suppliers reported that care providers can be charged for implementation support they provide at the start and some care providers also reported a software set-up fee.
Management and administrative activities	Digitisation of paper records	Upfront cost associated with implementation period	The cost of this will depend on how it is managed, whether it is outsourced or someone is employed to do this work. One supplier reported that it takes 8 hours to digitise a paper record, although this can vary depending on the length of time the person has been with the service.
	Change management activities	Upfront cost associated with implementation period	The cost of this will depend on how it is managed, whether it is outsourced, whether there is in-house project management support or whether senior management/staff time is diverted to project manage implementation. Change management consists of the range of activities reported in *Chapter 4* of the report.
	Business continuity plan	Upfront cost and recurrent to update	A plan is required to ensure business continuity in the event of an outage or cyber hacking event.
	Security management of handsets and other devices	Recurrent cost	Suppliers offer device management for handsets purchased through them as an additional subscription fee. This involves tracking the handsets, ensuring they have up to date security software, and in the event of loss wiping the handsets, so that data integrity is not compromised. This option is not available if the care provider does not purchase the devices through the supplier. In such cases, they would need to manage the security of their assets. Costs would depend on whether this is managed in-house through an in-house IT support team or is outsourced.

by device make and model, but one care professional did note that replacing their 'fragile' handheld devices had been costly for their care home (Care staff member 24).

Benefits and disbenefits of digital social care records

Participants in the study discussed the benefits and disbenefits of DSCR implementation in broad terms, from the perspective of the organisation, but also different groups of people including people drawing on care and their relatives. The range of benefits (and disbenefits) described as realised correspond with the expectations of senior leaders that we summarised in *Chapter 3*, but, as should be clear from previous chapters, not all care providers, care staff, people drawing on care and relatives experience benefits from the introduction of DSCRs. What we add here is an analysis of the production of these benefits, showing how outcomes (both monetisable and non-monetisable) depend, among other factors, on the realisation of three outputs: high-quality records, that is accurate, detailed, clear and complete; accessible, up-to-date information about care delivery for all clients; and secure information about care delivery for all clients.

Table 6 summarises the factors that facilitate or act as barriers to the realisation of the three core outputs from DSCR implementation. These factors relate to the technical features of the DSCR and how these interact with characteristics of the organisation, its staff, the care setting and location of care. Many of the barriers can be mitigated or overcome where care providers adopt the strategies outlined in *Chapter 4* that facilitate successful implementation and have support from suppliers to address any technical problems. Barriers relating to particular groups of people, such as those with low proficiency in English or poor eyesight, may require software developments, as described in *Chapter 6*.

In *Table 7* we summarise the outcomes from DSCR implementation and the factors that either facilitate or act as barriers to the realisation of these outcomes. The table illustrates how variation in the realisation of these outcomes depends in large part on the realisation of the three outputs, that is high-quality records, accessible and up-to-date records, and secure records. Where care providers are not consistently achieving these outputs, they are unlikely to experience benefits from DSCR implementation. Rather they are likely to be experiencing multiple disbenefits. The table also illustrates how the availability of additional technical features, such as analytics and the adoption of other digital technologies that are interoperable with DSCRs, can increase the likelihood or extent of certain benefits occurring and expand the range of benefits attained.

Impact on the care provider business

It was not clear from participants whether the investment would over time deliver cost savings or sustain and grow the business. The care providers involved in this study did not seem to be tracking the impact of their investment on the financial performance of the business. Care providers that had successfully adopted by 2019, reported time savings and saw DSCRs as putting the business on a stronger financial footing, but in ways that were not easily monetised:

> *Of course, at the end of the day, it is cost saving […] But there is more to it. There is the people that we care for that is at the centre of what we do and that's where the value lies […] When you talk about cost saving, there's a lot of things. Nobody's falling down having injuries […] That's a big cost saving. You know your reputation, you can't put money on it. There are there are things that maybe they're [providers who do not see benefits as obvious] not looking at it from a bigger picture.*
>
> *Care home senior leader 4*

Care providers judged the financial implications of DSCR adoption by contrasting different sets of costs invested with costs perceived as saved. For example, one care home senior leader expected to see slight savings once they had been using DSCRs for longer, anticipating that 90% of the costs to maintain the DSCR would be equivalent to their printing bill, which did not include the costs of archiving paper records. Others, like the senior leader in the quote above, thought that while DSCRs may be slightly more expensive than paper records, it was important to consider non-monetisable benefits. Still others were uncertain, as one senior leader expressed: 'as a manager for me to audit and do all these things, I think it's worth it. But is it worth the price? I don't know' (Care home senior leader 19).

TABLE 6 Facilitators and barriers to achieving core outputs from DSCRs

Outputs	Facilitators	Barriers
High-quality records, that is accurate, detailed, clear and complete	• Prompts reminding care workers to complete tasks and essential activities • Facility to upload images to the DSCR • Effective systems for caching data entered during internet outage/blackspot, and synchronising when back online • Staff feel able to record in real time, enhancing accuracy of recording • Auditable, easy-to-use system for changes to records, allowing for real-time and retrospective data entry • Back-up and contingency plan in case of outage or cyber-attack • Consistently reliable and fast internet/mobile data reception in the local area or building • Effective training for staff to reduce data entry errors and increase confidence in using DSCRs	• Low use of free-text entry (associated with overuse of icons), leading to loss of detail • System lacks flexibility to customise for data capture requirements • Internet outages/blackspots leading to data loss • Staff do not feel able to enter data in real time • Staff are not able to navigate the system, leading to inaccurate data entry or data loss • Staff develop 'workarounds' for completing or making changes to records, leading to inaccurate or non-completion of records
Accessible up-to-date information about care delivery for all clients	• Real-time information updating • DSCR is easy to use, easy to navigate, easy to locate information • Effective systems for caching data entered during internet outage/blackspot, and synchronising when back online • Back-up and contingency plan in case of outage or cyber-attack • Consistently reliable and fast internet/mobile data reception in the local area or building • Reliable devices with good accessibility	• Internet outages/blackspots leading to data loss • DSCR limitations lead to continued use of paper records • Limited access to historical data • Devices with poor accessibility so that some staff cannot access information
Secure information about care delivery for all clients	• Good security practices limit the risk of cyber-attacks • Back-up and contingency plan in case of outage or cyber-attacks	• Poor data security practices increase the risk of cyber-attacks

Time horizon for benefits and further digitalisation

Evidence from participants suggested that it may take some time for the benefits of DSCRs to accrue. Care providers who were still in an early phase of implementation often reported having not yet seen any benefits compared to previous ways of working, but they were often still in the phase of hybrid working with both paper and digital records. In contrast, those senior leaders who were 'early adopters' (pre-2019) said that they were now working completely digitally and had nearly eliminated all hybrid or paper-based work processes. They felt they were using DSCRs to either their full potential or enough to see more benefits.

Key benefits that they reported as emerging over a longer time frame were better communication with other organisations and across the organisation, including with people drawing on their care services and their families, and more streamlined working. This was achieved as DSCRs became increasingly interoperable with other digital systems that care providers had adopted and with digital records held by partnering organisations. One senior leader described how, as more data sharing is undertaken digitally, there is greater integration and better communication once 'you start linking all these systems together' (Care home senior leader 2).

We observed this drive towards introducing more digital technologies and linking them together among the care providers participating in this study for whom DSCR implementation had been successful. As one home care senior leader explained:

> *We haven't got rid of anything, we've only increased actually the technology because as we've grown in confidence with using it and therefore you've found other uses. So, for instance, we started with the [DSCR] system, which was purely for the care records, but now they've actually expanded to rostering. So, we actually do the scheduling, the rostering, and that's only enhanced the product.*
>
> *Home care senior leader 7*

TABLE 7 Facilitators and barriers to achieving positive outcomes from DSCRs

Outcome	Facilitators	Barriers
Time taken to record care delivery is reduced	• Staff record all data in the DSCR in real time • Icon-driven systems reduce data entry time • Barcodes for scanning medicines reduce data entry time	• Staff are unable to navigate the system, so … continue to use paper records • Lack of trust in the DSCR system, so continue to use paper records
Time taken to complete managerial tasks is reduced, that is handovers, audits, updating care plans, monitoring, inspections	• DSCR system generates automatic reports, enhancing care for individuals and producing relevant information for key stakeholders, for example CQC, coroner, LAs, safeguarding • DSCRs generate alerts to support monitoring • Analytics package and/or analytical support facilitate the analysis and presentation of data	• Digitised records are not of a high quality • Information about care delivery for clients is not accessible or up to date • Lack of trust in the DSCR system leads to manual checks • DSCR system creates many alerts requiring action, some of which may be false alerts • DSCR does not have an easy-to-use reporting feature
Reduced use of paper and associated printing, paper, postage and archiving costs	• The more recording systems are digitised (e.g. care planning, rostering, medications management), the less paper record systems are required	• Lack of trust in the DSCR system leads to continued use of paper records
Reduced travel by senior leader	• Only relevant for home care agencies, as digital records mean checks can happen remotely rather than needing senior leaders to travel to people's homes to complete spot checks on a weekly basis	• Lack of trust in the DSCR system leads to continued use of paper records
Accurate information is shared between care staff, clients/relatives and other professionals more easily	• DSCR enables real-time information updates • DSCR has a patient portal that care provider uses • DSCR has GP Connect that care provider uses • DSCR supplier prioritises and delivers interoperability with a range of other systems used by the care provider or their partners	• Digitised records are not of high quality • Information about care delivery for clients is not accessible or up to date • DSCR does not have patient portal, or the care provider does not use it
Increased safety of care	• DSCR has prompts or features reminding care staff to complete tasks • Analytics package and/or analytical support facilitate auditing and trend analysis, driving more responsive and proactive care • DSCR system raises appropriate alerts of incidents or when tasks are not completed	• Digitised records are not of high quality • Information about care delivery for clients is not accessible nor up to date • Care staff make poor decisions in recording an incident before attending to the client's needs, resulting in unsafe care
Increased safety of workers	• DSCR raises alerts when care staff are not signed out	• False alerts lead to a loss of trust in system
Better-quality care	• Care staff can spend more time on care tasks as data entry time is reduced • Prompts ensure care staff follow best practice in delivering care, and promote more personalised care • DSCR care planning systems and prompts are personalised to the specific needs and preferences of clients	• Information about care delivery for clients is not accessible or up to date

continued

TABLE 7 Facilitators and barriers to achieving positive outcomes from DSCRs (*continued*)

Outcome	Facilitators	Barriers
Improved communication between care staff, clients/relatives and other professionals	• Accurate up-to-date information is shared between the care provider and other professionals, the care provider and clients/relatives, between care staff and between the provider's care staff and management	• Clients/relatives find the DSCR hard to navigate and inaccessible • Clients/relatives do not have a device for viewing DSCR • Digitised records are not of a high quality • Information about care delivery for clients is not accessible or up to date
Reduced legal costs	• Care staff have instant access to up-to-date high-quality records to deliver the right care at the right time • DSCR supplier prioritises and delivers interoperability with a range of other systems used by the care provider or their partners • Analytics package and/or analytical support facilitates auditing and trend analysis, driving safer, more responsive and proactive care	• High-quality records are not achieved, resulting in care staff not having the information they need to deliver care
Care staff job satisfaction is increased	• Care staff have instant access to up-to-date high-quality records to deliver the right care at the right time • Care staff spend less time recording care and more time on aspects of care from which they derive greater job satisfaction	• Digitised records are not of high quality • Information about care delivery for clients is not accessible or up to date, leading to continued use of paper records
Reduced environmental impact	• The more recording systems are digitised (e.g. care planning, rostering, medications management), the less paper record systems are required • Senior leaders travel less	• Lack of trust in the DSCR system leads to continued use of paper records

This shift in care providers approaches to digitalisation of their businesses was also reported by suppliers, with one noting:

> *I quite often do talks and panel discussions and […] those discussions have gone drastically from why adopt DSCRs to what comes next?*
>
> *Supplier 2*

Although some care providers had a negative experience of DSCRs, the sense of progress with respect to the digital maturity of the sector was reinforced by accounts from some managers that their workforce was changing since introducing DSCRs. They reported that they were attracting more digital- or technology-oriented staff interested in developing and improving the use of DSCRs and other technologies in their business.

Chapter 8 Discussion and conclusions

Summary of key findings by research question

This evaluation aimed to generate timely evidence to help local areas and organisations to implement DSCRs within adult social care provider organisations in a way that delivers the greatest benefit for the most people. We used rapid evaluation methods and evaluated the implementation of DSCRs by home care and care home providers in four sites across England. Our study was designed to:

- provide evidence to support local areas to deliver on the digitalisation agenda
- pay attention to the issue of equality, diversity and inclusion
- understand the economic and financial implications for care providers of adoption
- provide insights into the use of modern features of DSCRs that are likely to be of interest to those implementing DSCRs in England and in care-related areas of practice in other jurisdictions.

We summarise the key findings below by the study research questions.

Within which contexts is digitisation of social care records happening and why?

This research question sought to understand the adoption/non-adoption decision from the perspective of senior leaders in care providers, what influences it and whether there are particular characteristics of care providers or their contexts that influence outcomes.

The research found that three factors influenced care providers' decisions to adopt: policy attention by the English Government on digitising adult social care, the availability of funding to support digitisation of care records, and a belief that adopting DSCRs would deliver benefits for their organisation, care staff, the people who draw on their care services and their families. Of these factors, the continued policy attention and availability of funding seemed to be most critical in driving the rapid pace of adoption witnessed over the past few years. The high profile of digitisation and funding not only encouraged adoption by those who had been wanting to adopt but had felt unable to do so due to cost, but also by those who were less willing. In the case of the latter, it was the continued policy attention, actions of ICS digital leads and responses by LAs and their peers that meant they felt a pressure to adopt, albeit for some pressure was felt due to misinformation about the need to adopt DSCRs to achieve good inspection outcomes.

Despite the policy attention and available funding, some care providers continued to resist adoption. These were smaller organisations, who were concerned about costs of aspects of implementation, such as training, and longer-term affordability in the context of the difficult funding situation for the sector. Organisations that did not want to adopt were also sceptical of the benefits and harboured fears about data security breaches, how data would be used by other organisations, and, especially in the case of home care agencies, data sharing between professionals being impeded. Many of these issues, including future affordability, were also raised by organisations who had decided on balance to adopt and are live issues around which social care providers continue to need support to allay and address their concerns. Small organisations that felt more vulnerable to economic conditions particularly emphasised the need for continued financial support.

An important part of the adoption decision is the choice of DSCR supplier and evidence of buyer regret suggests that not all care providers are making the right choice for them. Care providers reported finding it difficult to make this choice, as they were too busy and did not have the confidence to choose the best suppler from the large number available. The ASL was not seen as a solution to the challenges care providers had making a choice, as it still contained a lot of information, some of which was reported not to be accurate. Senior leaders thought they would benefit from more concise guidance on how to choose DSCRs, especially knowing what questions to ask suppliers before choosing DSCRs, so they can have confidence that software does what they need and expect it to do. They also wanted recommendations and valued the experience of others, to help them cut through the mass of information and 'sales talk'.

What are the expectations, experiences and consequences of implementing digital social care records?

Through this research question, we sought to explore expected (dis)benefits, experiences and consequences, intended or unintended, of implementing DSCRs within care providers from the perspectives of senior leaders, care staff, people drawing on care and their families. We were particularly interested in understanding the challenges organisations faced and the strategies they had found to mitigate or overcome them.

Whether care providers were very willing or less willing to adopt DSCRs, all expected DSCRs to increase the accuracy of record keeping, improve the timeliness of access, and reduce the time spent on record-keeping and related activities, with concomitant benefits for the safety and quality of care, the safety of the workforce and accountability. In general, care providers reported that it took time to realise these benefits, in part because the implementation process was complex and long, but also because benefits seemed to accrue over time as the organisation and its staff learnt how to maximise the value from digitisation of care plans and became more digitally ambitious. Many who had only recently adopted felt that they had not yet seen any benefits; some were experiencing only disbenefits and had abandoned or were considering doing so.

Although participants reported variable experiences of implementing DSCRs, the sets of challenges they faced were similar and broadly predictable, aligning with findings from other research and implementation frameworks.[16,21,44] Challenges revolved around:

- the complexity, length and resource-intensive nature of the implementation process. The digitisation process itself was identified as particularly long and resource-intensive, as paper-based records had to be entered manually onto the digital system, resulting in a period of hybrid (paper and digital) working
- staff anxieties around adoption and lack of confidence, particularly among those who were less familiar with technology. These anxieties and confidence deficits meant staff resisted using the DSCRs or used them incorrectly
- the objection of some clients to care staff using mobile devices, combined with the perception of some care staff that using devices while working with clients was rude, meant some staff resisted using DSCRs and developed time-consuming workarounds
- problems with the technology, with many senior leaders in care providers expressing disappointment about DSCRs not meeting their expectations due to technical problems, lack of automation, clunky interfaces and poor usability, or missing features
- problems with the dependence of the software on the wider technology infrastructure, notably reliable internet connection, that was often absent especially in rural areas.

Care providers' experiences of facing these challenges varied, often due to the choice of DSCR system, but also because they may have adopted strategies and activities to manage or mitigate the effects of these problems. We found that providers who were part of a franchise or chains were at an advantage compared to independent providers, as they were able to draw on additional capacity, such as project managers and IT support, as well as the experience and resources of others within the organisation, which helped with planning and managing the change process. Additional financial and technical advice and support would benefit smaller independent care providers prior to and during implementation to guide the process.

In addition to careful selection of the DSCR solution, the key strategies that were identified as supporting successful implementation were:

- planning and adequately resourcing the change process, notably taking a staged approach to the introduction of features to allow more anxious members of the workforce, clients and relatives to gain confidence in the systems and have time to get used to changes in an incremental way
- a positive culture and committed leadership to motivate change, including having DSCR champions to lead, motivate and support change at all levels of the organisation
- training for everyone who will use DSCRs, including clients and relatives, and additional training and peer support for staff who are less familiar with technology
- testing the system by piloting and using fabricated 'example' residents to identify and resolve problems

- strong systems for data security alongside a contingency and business continuity plan to ensure continuity of care in the event of a cyber-attack
- early and ongoing engagement and communication with all groups who will use or are affected by the introduction of DSCRs, including staff, clients and relatives, and partner organisations, to ensure 'buy-in', understanding of the changes (e.g. around use of phones by staff) and that the system meets or is adapted to their needs
- ongoing communication with and support from the supplier to address technical problems and suggestions for improvements.

Importantly, we identified that abandonment seemed to occur when care providers experienced a range of technical problems and other challenges that meant they could not trust the information contained in the DSCR, and there was no support from the DSCR supplier to help them address the technical problems. This underlines the importance of the care provider–supplier relationship to successful implementation and of choosing a supplier with good customer support.

How do people experience using specific features of digital social care records within care relationships?

Digital social care record suppliers position their products as modern systems, with user-friendly interfaces designed specifically for use in social care settings to support staff to deliver person-centred care. The DSCR systems incorporate a range of features to deliver on these claims, although there is variability across the systems in the available features and as we learnt through this study their reliability. Through this question we wanted to explore how care staff, people drawing on care and their relatives experience some of these features. We wanted to understand whether the features helped to reduce technical challenges, ensured better alignment of recording practices with care practices, improved the ability to share and use data held on the DSCRs and ensured DSCRs meet care providers' expectations – all of which are identified as problems with systems.[16] We looked at the use of icon-driven systems and emojis; speech to text; attaching images to records; real-time recording, access and notifications using wireless devices; using reporting and analytical features; the patient and family portal; and interoperability of systems and sharing data beyond the care provider.

A point of variation across the available DSCR systems is the extent to which they are icon-driven and use emojis to support recording in real time. There was no evidence from this study that icon-driven systems outperform or underperform systems that require more narrative entry; rather choice between these systems should be a matter of preference. Both types of systems can facilitate person-centred care delivery, underlining an important message from this work that where systems align well with care delivery tasks digital recording does not have to come at the expense of person-centred care and relational work.[16,45] However, narrative entry systems were generally seen as being more flexible, supporting more detailed documentation and, it was argued, person-centred care. These benefits come at the expense of time taken for data entry, so icon-driven systems are likely to deliver greater time savings and were seen as more accessible for people with low English proficiency.

The ability of systems to support real-time recording of care delivery and consistent access to up-to-date information is critical to systems working as expected and to care providers seeing the benefits from their investment. Where care staff were confident and used DSCR systems alongside care delivery, in general, we heard that systems supported care routines and safer practice by reminding care staff to complete the tasks required for each client. As has been found in previous research, there were examples of staff becoming task-focused rather than person-focused.[46] Additionally, systems sometimes lacked flexibility to cater to specific situations, resulting in care staff developing time-consuming workarounds. However, the latter tended to be to address unreliable (or absent) offline working and synchronisation functions or slow devices, which made real-time recording difficult and affected the faith of all staff in the accuracy of records. Investing in good hardware and technology infrastructure is therefore important, and, especially for home care organisations operating over rural areas, choosing a system with a reliable offline working function is essential.

Although senior leaders in care organisations thought speech-to-text was useful, it was perceived as unreliable by care staff and rarely used. Two features that were universally identified as supporting the delivery of safe and high-quality care were the ability to upload images to digital records and features that enabled analysis of client data. These features varied considerably in their functionality across DSCR systems and, in the case of analytics and automated reports, in

their availability within 'basic' packages. Where these features were complex, did not work well, or were not available, care staff reported making mistakes or time-consuming workarounds. Care providers should test the functionality of these features before purchasing a DSCR system. However, given the high rates of uptake, DSCR suppliers should be developing these features to respond better to care providers' needs and to ensure small independent care providers are not at a disadvantage due to their inability to afford additional analytical features and automated reports.

We found that early adopters of DSCRS were more likely to be using the patient and family portal and to have DSCRs that were interoperable with other technologies or other digital systems (used by the provider or their partners). Additionally, DSCR systems varied in their interoperability and in their offer, with some only offering the portal at extra cost. Where these features were available, and organisations were using them, they generally had good experiences.[47] Care providers felt strongly that interoperability with other digital technologies and the systems of partner organisations was key to realising greater benefits from DSCRs. Despite the fears expressed about using the portal, relatives who were able to use the portal were generally positive and found it useful for accessing information; problems only emerged where records were not accurate, or relatives struggled with the technology. Nevertheless, improvements to portals may be needed to improve usability for clients and relatives and training should be considered.

What are the experiences and consequences of digital social care record implementation for people in different social categories?

The implementation of DSCRs presents both opportunities and challenges for care staff, clients and families. We uncovered examples of how DSCRs supported delivery of more person-centred care and more inclusive practice, enabling staff to remember preferences or specific needs related to, for example, gender identity and health conditions. However, for some care staff, clients and families, digitisation is an unwelcome and anxiety-inducing change. This is particularly the case for people who are unfamiliar with technology, who are often older. Initial fears and concerns about DSCR usage, however, were allayed by good training and we did not find any evidence that DSCRs were causing older workers to exit the workforce. Training methods, such as videos, courses, or face-to-face sessions, along with gradual and supportive introductions to the technology, were effective in building confidence, digital skills and fostering greater acceptance among staff and families. It was the case, however, that few organisations made training available to clients and families – a situation that clients and families believed should change.

A concern was differences in the experiences of people with certain health conditions, like limited dexterity and poor eyesight, and people with low proficiency in reading and writing English, all of whom reported having difficulty using DSCRs. Accessibility features like large text, read-aloud functions, and the availability of devices with larger screens were all reported as functions that would assist those with poor eyesight or dexterity, but this did not seem to be routinely available on DSCRs. Those with limited English reported that icon-driven systems were easier and functions like predictive text and autocorrection were also helpful. They suggested that a translation feature, or the availability of DSCRs in languages other than English may support international staff and clients to use the system more effectively, but this again was not routinely available on DSCRs.

What are social care providers' economic and financial considerations in implementing digital social care records?

As independent businesses, the financial implications of DSCR adoption should be a central consideration for care providers. We did not find evidence, however, that care providers were developing a full business case for adoption. Care providers articulated expected benefits and risks to their businesses, but often seemed to lack full information about the costs associated with adoption, with some reporting being surprised about certain costs and unprepared for what was needed to successfully manage the change from paper to digital records and get the most out of going digital. While care providers that adopted DSCRs expected benefits for their organisation, they also referenced benefits for staff, the people drawing on care and their relatives and wider benefits. Decisions around adoption seemed to be influenced by stories and the opinions of peers rather than hard data. As far as we could gather from the care providers that participated in this study, investment decisions were not based on data about likely costs needed to realise benefits for the organisation and the likely impact of the investment on the profitability or sustainability of the business; nor did they consider the time horizon over which the benefits from the investment would be realised.

Through this study we captured information on the likely benefits of DSCR adoption and the likely time horizon over which benefits might be achieved. The benefits identified align with previous evidence, but we improve upon the existing evidence base in two ways.[16,17] First, we outline five categories of costs (hardware, software, infrastructure that is necessary for the functioning of digital devices, training and implementation support, and management and administrative activities); and second, we outline the impact pathway from the perspective of the care provider, identifying three key findings:

- Benefits to the organisation cannot accrue where implementation is unsuccessful and does not result in high-quality records, that is accurate, detailed, clear and complete; accessible, up-to-date information about care delivery for all clients; and secure information about care delivery for all clients.
- Benefits are likely to accrue incrementally over a long time horizon, perhaps as much as 5 years, so if there is a financial return on their investment it is unlikely to be immediate.
- Benefits are more likely to accrue through the adoption of multiple digital systems and their integration with the DSCR and the digital systems of partner organisations.

This underlines the importance of allocating the necessary resources to all implementation activities, not just the software and hardware, and having a digital strategy for the organisation.

What was less clear was whether the investment would over time deliver cost savings or contribute to the profitability or sustainability of the organisation. The care providers involved in this study did not seem to be tracking the impact of their investment on the financial performance of the business. Analysis of the financial implications seemed to be developed through impressions and by contrasting different sets of costs invested with costs perceived as saved. While impressions are valuable, a financial analysis would need to consider the impact on financial performance of the business more systematically, looking at indicators related to financial performance and potentially affected by DSCR adoption such as more home care visits and reduced turnover of staff. Not least because care providers did not seem to be tracking the impact of their investment on financial performance, care providers did not appear to have the capacity or be willing to share this information for research purposes for a study of this kind.

It remains an open question as to whether care is more efficient or effective because of DSCR implementation. The data we have collected suggest that where implementation is successful and results in consistently achieving high-quality, accessible, up-to-date and secure records, benefits are most likely to be observed (at least initially) through efficiency gains. However, for these gains to be demonstrated, it is necessary to confirm both time savings for all staff groups related to faster completion of and access to 'paperwork' and that the time saved is redirected towards more valued activities, for example more face-to-face care. Our findings suggest that efficiency gains may vary by DSCR system, but this would need to be tested. The data we collected are ambiguous with respect to whether care was more effective. Senior leaders and care staff could point to examples of safer and better-quality care and there were some of examples of DSCRs improving care from the perspective of people drawing on care and their relatives, notably their sense of care being more personalised. However, examples from people drawing on care and relatives often related to instances where organisations had implemented the patient and relative portal or had a range of technologies in place. It may be that more effective care is only achieved over time, through a strategy of further digitalisation of provision and adoption of additional features.

Main contributions of this study

The study provides some support for the DiSC Programme, with evidence for the importance of both continued attention on digitisation and making funding available to overcome inertia among care providers and drive adoption of DSCRs. However, we also illustrate the variability in the ability of care home and home care organisations to seize the opportunities presented by this programme, choose the right supplier for them, successfully implement DSCRs within their organisations and continue to pay for them once the funding has ended.[44] Abandonment and problems were reported by all types of organisations, but smaller, independent organisations were systematically at a disadvantage compared to organisations that were part of either a franchise or group throughout the adoption and implementation process as they could not draw on advice and additional resources in the same way and had less capacity to absorb

expensive problems. It is not surprising that these organisations saw adoption as risky and were more likely to have not adopted DSCRs. Future funding schemes for digital technology may need to attend more to organisational diversity, potentially adjusting policies to provide greater support where organisational capacity to absorb problems and undertake digital change is weaker.

Drawing on insights from organisational studies of innovation, we frame the process of going digital as a 'journey'.[48] This perspective allowed us to outline the typical journey from an organisational perspective, which consists of a period of hybrid (paper and digital working) while paper records are being transferred over to the digital system, followed by a period of embedding the use of features within care workers' and managerial routines. More successful organisations recognise that DSCR implementation involves both 'technical' and 'adaptive' change benefitting from planning but relying on human behaviour for its success, so they stage the introduction of features to give staff time to adapt and to ensure features are working well before moving onto another feature.[49] Drawing on the complexity-informed non-adoption, abandonment, scale-up, spread, and sustainability framework and building on findings from previous research, we also outline the common challenges that organisations should plan for and the strategies they should adopt to mitigate and overcome these challenges.[16,21] This reduced set of most complex challenge areas and strategies for success for a typical journey provides a more succinct and clearer guide to implementation than a generic implementation framework.

Importantly, in outlining the typical journey we identify loss of trust in the DSCR solution as a 'critical turning point' leading to abandonment of the solution.[50] In contrast, successful implementation can start a journey of digital transformation for the business characterised by a period of continuous change, in which the process of introducing new features extends to introducing new technologies that can integrate with the DSCR.[51] Similar to the maturity model identified for US nursing homes, we find that interoperability, analytics and client/relative use are adopted later in the journey.[52] Given similarities in the staging of adoption of digital features, it may be that the digital maturity model outlined by Powell and Alexander is a useful basis for assessing digital maturity of English care providers and helping providers to think about a sensible ordering of adoption of DSCR features and associated technologies.[52]

A further contribution of this study is in clarifying the likely effects of digitisation on already marginalised groups of people and whether it exacerbates existing problems, for example around the workforce supply. Although there was anxiety among staff who were unfamiliar with technology, who tended to be older, importantly we did not find evidence that anyone was leaving the workforce; in contrast, we heard that good training helped staff to overcome their fears, accept DSCRs and use them effectively. Instead, we found that DSCRs were difficult to use for people with disabilities, such as poor eyesight and dexterity, and low proficiency in English, as DSCRs often lacked accessibility features for these groups – a concern given the international and age profile of staff.[53] With respect to clients, DSCRs can promote more person-centred and inclusive practice, but a lack of devices to access DSCRs, limited accessibility features and low awareness of DSCRs meant they could also be excluding people who draw on care and their families from involvement in the planning of their care. These findings should inform implementation of the recently published Digital Inclusion Action Plan, which includes several initiatives aimed at boosting digital skills, reducing data and device poverty across the country, breaking down barriers to digital services, and increasing confidence in using digital services.[54] It suggests care staff and people drawing on care as target groups for initiatives around device poverty and a focus on building digital skills and confidence with these groups.

Strengths and limitations

The study took place in four sites across England and involved a broad mix of care homes and home care agencies serving diverse population groups, in terms of age, disability and ethnicity. Although we did not include any national care providers that were on the CQC Market Oversight Scheme, participating care providers included franchises, groups and small independent businesses. While our sample is not representative, it is diverse and importantly providers were using a range of DSCR systems, meaning we were able to contrast experiences with different types of systems and, by corollary, different technical features and levels of customer support. Additionally, we sought to gather a range of perspectives on implementation of DSCRs in this research and included the perspectives of people who draw on care and their families and suppliers, which are largely absent from existing accounts.[16] Their views enriched our findings,

providing a challenge to the perspective of senior leaders of care providers and care staff. We are therefore confident that we have surfaced the range of challenges and consequences of DSCR implementation and have gathered detailed insights into the use of different features. However, our study should not be used as an indication of the prevalence of problems and successes of DSCR implementation, although we note that a recent survey of home care providers largely supports our findings around the mixed picture of implementation success.[44]

We achieved a diverse sample despite the challenges of recruitment to research in what is a very resource-constrained and largely research naïve context.[55] To help recruitment, we worked with ICBs in the sites and the local CRNs, who offered care providers an additional incentive payment. This two-pronged approach was more successful in some sites than others and depended on the strength of local relationships. local CRNs were often at an early stage of developing relationships with care providers, and where relationships existed already these tended to be with care homes (often through the ENRICH network) rather than home care agencies. ICB Digital Leads often had better relationships, especially where they had been working with local care providers for some time around the Data Security and Protection Toolkit and encouraging DSCR adoption. However, home care agencies were much harder to recruit than care homes, and it was also more difficult to recruit non-adopters of DSCRs, in part because they are now fewer in number but also because these organisations tended not to be in contact with the ICBs or local CRNs.

Recruitment of care staff and people drawing on care and relatives was also challenging. This was in part because many care provider senior leaders perceived the subject of the study as irrelevant to people drawing on care and relatives, and we had to work hard to convince senior leaders otherwise.[56] But it was made more difficult by challenges retaining care providers in the study over the two phases of work. Despite having recruited 22 care providers that had adopted or were in the process of adopting DSCRs, only 9 agreed to participate in phase two. Many of these providers took a long time to respond and to arrange access to staff, clients and relatives due to other pressures on their time. Retention in the study was not helped by the reorganisation of local CRNs into Research Development Networks that took place between phases one and two, as the changes led to delays to some payments for provider participation that took time to resolve. A member of the EAN stepped in to help us recruit further care staff, clients and relatives from their care provider, demonstrating the value of co-creating the evaluation.

This was a rapid evaluation study, designed to provide robust, relevant and timely evidence to support decision-making. However, the national target of 80% DSCR adoption and the rapid pace of change meant there was a danger that a study of adoption and early-stage implementation would produce findings of limited value. Working with the EAN, who brought expertise from their broader professional and lived experience, we co-created a study that focused on understanding how to make the most of DSCR adoption and implementation. Hence, we recruited care providers who had been early adopters of DSCRs and could reflect on the value derived from DSCRs once embedded in practice. Additionally, we adopted a phased approach to the study, which facilitated sharing of early findings and regular stakeholder engagement to ensure the research evolved to meet the needs of evidence users.

In scoping this project, we identified the need for economic evaluation; however, expecting that data collection would be challenging, particularly in the context of a rapid evaluation, an economic evaluation would not have been possible. We limited the scope to a qualitative exploration of the economic and financial considerations for social care provider organisations when implementing DSCRs and assessed care providers' capacity to estimate their actual returns on investment. This was difficult, however, as managers of care providers often lacked knowledge of the business case, the costs of DSCRs and their implementation. Sometimes this was due to turnover of staff (particularly an issue for providers who had implemented some time ago), but sometimes it was because care managers were not part of the decision-making process (an issue where care providers were part of a franchise or group). It was usually not feasible to negotiate access to senior leaders or accountants within the time frame of the project, although we managed this in a few instances and received three written business cases. While we judged that care providers participating in this study were not collecting data to assess their return on investment, given the limitations and the fact this study did not include any large national providers this finding should be treated with some caution and should not be generalised beyond the study population. What is clearly demonstrated, however, is how challenging it is to capture quantitative data for economic analysis when working with care providers.

Key messages and implications for decision-makers

The study was designed to inform decision-making around DSCR implementation. With input from the study EAN, the SOCRATES PAG, and participants in the stakeholder workshop, we developed 10 key messages from the research and associated recommendations for decision-makers.

Improving decision-making around choice of digital social care record system

Choosing the right DSCR system is important for successful implementation. The research found instances of buyer regret and care providers reported finding it difficult to choose between the large number of available suppliers, due to a combination of limited capacity and knowledge. Although close to 80% of care providers have now adopted DSCRs, buyer regret means providers are switching suppliers, making the need for good impartial advice to help care providers choose the right DSCR a live issue.

Recommendation 1: Providers need good and impartial advice to choose DSCRs; current resources need rethinking to meet this ambition.

Stakeholders identified a range of ways in which resources could be improved to make it easier for care providers to compare DSCR systems and identify the optimal system for their organisation. These included strengthening the ability to compare systems by developing clear and easy-to-understand standards for features that are essential to functionality (e.g. offline working), and setting out requirements for optimal performance of each DSCR system (e.g. reliable Wi-Fi, 5G data, device specifications); supporting decision-making by providing guidance on what questions to ask in the form of a decision tree, making resources available in different formats, and offering specific advice or checklists of relevant features for different types of organisations, for example care providers of working age adults was highlighted; helping care providers to understand the financial commitment by providing more information about upfront and recurrent costs and return on investment; and promoting greater awareness of the local regional and national networks for advice.

Allaying concerns around the future affordability of digital social care record systems

Financial support encouraged adoption, but both non-adopters and adopters worried about affordability of DSCR systems, in the context of continued austerity. This research indicates that implementation is costly and takes time, that the return on investment is uncertain, and that the time horizon for realisation of benefits may be quite long – all of which suggest DSCR adoption may increase costs to businesses at least in the short term. If abandonment of systems is to be avoided, care providers need to see that DSCRs are delivering benefits and that systems can be financed from revenue. Especially small independent businesses may need further financial support to ensure they can continue to afford DSCRs and allocate sufficient resources to fully embed DSCRs in practice.

Recommendation 2: Providers need financial support for digital transformation, but this needs to be offered flexibility to ensure it supports the array of providers at different stages on their digital journey.

While acknowledging that future funding for digital transformation was uncertain and that budgets for care would remain tight for some time, stakeholders broadly agreed that the cost implications for providers of ongoing subscription fees needed consideration within NHS and LA contracts for provision. Stakeholders also supported the continued availability of digital transformation funds to stimulate adoption of digital technologies, but suggested accessibility could be improved and that a formula-based tool might be useful to determine funding levels for care providers at different stages of digital transformation and contexts of care.

Addressing confusion around digitisation requirements

Rumours about digitisation requirements seemed to thrive among informal networks. Care providers were not clear about whether digitisation of care records was a requirement and were uncertain about how it would affect inspection ratings by the CQC. In the context of concerns around future affordability and given instances of buyer regret, clarification is important.

Recommendation 3: Local and National Government, the NHS and the CQC need to provide clear and consistent messaging around expectations with respect to adoption of digital records and the future direction of travel

Stakeholders supported the need for clear messaging around whether DSCRs are a legal requirement, a requirement for achieving good CQC ratings, or a requirement for LA and/or NHS contracts. They noted that clear messaging about the direction of travel would be essential for ensuring that organisations do not go backwards with respect to digitalisation and suggested a national communication campaign, so care providers maintain their investment. The ongoing Commission into Adult Social Care led by Baroness Louise Casey may provide a good opportunity to clarify the direction of travel.

Improving digital skills for working in care contexts

The research found that for care staff who lacked confidence and familiarity with digital technologies good training was critical for developing the digital skills needed to use DSCRs effectively. It also identified that managers and care staff were not aware of features or were not using them correctly. The evolving context and digital capabilities of systems mean that ongoing training and skill development is essential.

Recommendation 4: Improve the priority care organisations give to digital skills training and expanding understanding of features of DSCRs

While acknowledging existing developments in this space, including the Digital Skills Framework and Skills for Care's various offers (e.g. digital champions modules, digital leadership programme, e-learning and level 5 qualification) and Better Security, Better Care's cyber training for front-line staff and senior leaders, stakeholders agreed more focus on skills for digital working in social care was needed. They suggested an educational campaign targeting all levels of care staff that considered continuous professional development and upskilling. It should make clear the benefits to organisations, so businesses prioritise training for their workforce.

Incorporating Recommendations 5, 6, 7 and 10 the campaign could cover the need for broad training in digital skills, using digital technologies in care (i.e. DSCRs, care apps and care technologies), leading digital change, safe and secure digital working practices, interpreting data regulations in the context of care, responsibilities around data sharing and why it matters, and how to discuss digital technologies with people who draw on care so they are aware of their rights, understand how their data will be used and can engage with and use DSCRs and other technologies. The campaign could align with activities as part of the Digital Inclusion Action Plan.[54]

Ensuring data sharing happens and obligations are understood

The research uncovered an instance of a staff member not sharing important information about a client with staff from another care provider as a consequence of moving from paper to digital records, resulting in unsafe care. Given complex data regulations and the changing landscape, in which there is rapid and uneven digitisation of systems by health and social care partner organisations, care staff may need help to understand how to interpret data regulations in the context of care delivery and develop new routines for data sharing to ensure client care is prioritised. Continuing to drive forward the interoperability of DSCR solutions would also help.

Recommendation 5: Care staff need support to understand data-sharing obligations in a digital context and DSCR suppliers need to continue to work towards interoperability of their solutions.

Stakeholders agreed that while legislation around data sharing may be clear, it is not well understood. They also noted that NHS organisations were often unwilling to share data with care providers despite a clear information governance framework for doing so. They made two suggestions. First, that the educational campaign could include reference to responsibilities with respect to data sharing. Second, they recommended developing National Institute for Health and Care Excellence guidelines to help care organisations understand good practice when working with digital records and technologies, as these would be seen as authoritative by both NHS and care organisations, promoting integration.

Addressing low levels of awareness among clients and their families about digital social care records and their rights

The research uncovered low awareness and confusion among people drawing on care and their families about DSCRs and how they were being used for care. This raises questions about whether care providers and their staff should be doing more to inform people about DSCRs and their rights with respect to their data.

Recommendation 6: Care providers and staff need to help clients and their families to understand DSCRs and their rights with respect to access to and use of their data.

Stakeholders noted that legislation in this area is clear and there are already many resources available on the Digital Care Hub that care organisations can use to raise awareness of clients' rights with respect to their data. However, they agreed that care organisations and staff may need more help to find and use these resources and have conversations with clients/family about their rights around access and use of their data. They suggested that this could be part of the educational campaign already mentioned.

Improving planning for and managing digital change

The challenges that organisations will face when implementing DSCRs are broadly predictable and there is good evidence for how to mitigate or overcome these challenges, although these activities require resources to be allocated towards them. Care organisations, especially small independent providers, may need more help to find relevant advice to plan, manage and resource change more successfully.

Recommendation 7: Care providers should receive more help to find relevant advice to plan, manage and resource digital change.

Stakeholders agreed with a need to focus on helping care providers to access advice. They noted that planning for and managing digital change is the focus of digital leadership training courses and could be part of the educational campaign. They also suggested organisations that should have a role in this space, including membership organisations and DSCR suppliers, as subject matter experts on their products. It was suggested that DSCR suppliers could host an online tech support forum where users of their product could post questions and receive responses, as one way of enhancing peer support.

Ensuring a good relationship between providers and suppliers

A good relationship between care provider and supplier was important for successful implementation of DSCRs. Technical issues were common and changes to add important missing features like e-signing were needed, as were additional flexibilities to ensure systems worked with care delivery. While good suppliers responded to the needs of their customers to ensure trust in the product, not all suppliers were responsive – a situation that could result in abandonment. Suppliers did note that development capacity was limited and that national roadmap requirements could crowd out developments requested by customers, suggesting a mechanism may be needed to manage the requirements of care providers and national stakeholders.

Recommendation 8: Suppliers should actively engage with care providers to ensure successful implementation and should maintain development capacity to respond to care providers' needs.

Stakeholders agreed that suppliers should work with care providers as equal partners, recognising the value each brings to the other's operations. However, they also felt that this is an area in which DSCR suppliers may need clearer and more binding guidance to ensure they respond in a timely and appropriate way to care providers when they are facing technical issues, have reasonable development needs or in the event of a cyber-attack. They noted that this may be particularly necessary for small independent businesses who are unlikely to be able to hold suppliers to account.

Stakeholders suggested that as the primary users of DSCRs, care providers should be able to influence what is on the national roadmap in a collaborative way. This may also help specialist providers, a group raised by stakeholders as often

ill-served, to make a case for larger suppliers to develop their products and/or for there to be more support for start-ups/products that are targeted at their market but are currently too small to be considered for the ASL.

Ensuring digital social care records are as accessible and as inclusive as possible

The research found that people with poor eyesight, dexterity and English found DSCRs hard to use. This is especially concerning given the client base and high rates of international care staff in the care workforce.[53] There is a need for DSCR systems to evolve to be more inclusive and for suppliers to provide better information about accessibility features of their products.

Recommendation 9: DSCRs need to continue to evolve to be more accessible and inclusive and suppliers should provide better information about accessibility features of their products.

Stakeholders agreed that suppliers should be encouraged to improve the usability of and accessibility features on DSCRs, noting that DSCRs should comply with existing Accessible Information Standards and national accessibility guidelines. They also thought that suppliers should have a responsibility to clearly state accessibility features associated with their product and features that support an international workforce, such as translation features or potentially noting the reading age of their product. They could also be expected to guide organisations towards devices with accessibility features, where these are needed.

Improving access to digital social care records for clients and their families

Patient and relative portals had benefits where they were used, but the research uncovered limited use even among early adopters of DSCRs with the feature.[47] Care providers' fears around using this feature and its limited use suggest that they may want to consider adopting it when DSCRs are well-embedded in care practice and may need some encouragement to adopt.[52] Where it was in use, disabilities and unfamiliarity with technology, however, meant that clients and relatives could have problems accessing and using the portal or digital features.

Recommendation 10: DSCRs need to evolve to improve access for clients and their families, and care providers should be encouraged to support clients and families to access and use DSCRs.

Stakeholders agreed that DSCR suppliers should be encouraged, where they lack the feature, to develop portals and, where they have the feature, to improve its accessibility for clients and relatives (as above noting the standards and guidelines). They also noted that DSCR suppliers should be encouraged to co-design the portal with clients and relatives, so it meets their needs. Encouragement to use the portal and to support clients and families to use it could be part of an education campaign.

Research recommendations

We have noted there is a danger that as financial support for DSCR adoption is withdrawn, care providers who are struggling with implementation abandon DSCRs, leading to declining rates of DSCR use. We proposed loss of trust in the DSCR system as the critical turning point at which care providers decide to abandon the system. Research that sought to understand the abandonment process, the role of trust in this process and how care providers can be encouraged to adopt a different system rather than return to paper-based records would be valuable and more so should rates of DSCR use decline.

A further issue deserving attention is the impact of digitisation on the structure and stability of the care provider market. We noted that digitisation is riskier for smaller, independent providers who are also less likely to have adopted DSCRs. Should adoption of DSCRs lead to financial stress, we may begin to see exit from the market of smaller independent providers. Equally should people drawing on care or commissioners develop a preference for care providers with DSCRs or more digital operations, this could also affect the structure of the market and lead to exit.

Although studies are emerging that suggest DSCR adoption is beneficial to the health and social care system, reducing hospitalisations, the impact of DSCR adoption and use on the efficiency and effectiveness of care from the care providers' perspective is still unclear.[57] Given the challenges of collecting financial and performance data from care

providers and the long time frames over which benefits may accrue, answering this question would require a large scale study. Such a study would also need to address the possibility that results differ for different DSCR systems and the complicating factor that DSCR adoption tends to be continuous with a process of digital transformation of the business, making it a complex intervention. However, it would help to make the case for DSCR adoption and deliver clarity on whether this investment primarily delivers benefits for care providers or for the wider health and care system.

Patient and public involvement

The aim was for patients and members of the public to guide and conduct the evaluation with the research team. As discussed in more detail in *Chapter 2*, we established the EAN, which included people who draw on care services, and their carers/relatives, as well as staff working in the sector. We supported their contribution to the research with regular meetings and information sharing sessions with the research team. Some members of the EAN contributed as peer researchers. We also involved members of the EAN in knowledge exchange activities, recruiting them to share our findings and facilitate group discussion in a world café workshop. EAN members were given the opportunity to comment on our recommendations.

Members of EAN who participated in the different phases of the study valued their inclusion which evolved throughout the project. Training and support to researchers provided by the EAN and the SOCRATES PAG facilitated shared understanding of the roles and responsibilities for carrying out this study. Having a dedicated team member who co-ordinated and liaised regularly with the EAN members, and the wider SOCRATES PAG was helpful and enabled us to address any issues as they arose.

From a research perspective, EAN members provided rich insights that helped to shape and focus the study on issues that mattered most to people working in services and drawing on care. They guided the study towards a focus on the impact of DSCRs on already marginalised groups and the potential for DSCRs to exacerbate existing problematic trends around recruitment and retention of the workforce. They also identified likely challenges around data collection and facilitated access to other care providers and suppliers. We sought to involve people as much as possible given resources and their capacity and willingness to get involved in different research tasks. EAN members valued this flexibility and engaged in different ways.

The main challenge for the research team arose from the rapid timescales for the research. Co-creation of research requires detailed planning and flexibility, and we were not always able to be as flexible as we would have liked. Co-ordinating peer research was especially challenging, as we were constrained by the availability of care providers which often did not match the availability of peer researchers.

Equality, diversity and inclusion

One focus of this research was on the experiences and consequences of DSCR implementation for people in different social categories, recognising that there are inequalities and inequities in access to and outcomes from social care that digitalisation may improve or exacerbate. We explored these issues with care staff, people who draw on care and their families. We did not impose any criteria for participant selection but relied on care providers to support us to recruit a range of participants with different characteristics. This is a pragmatic response to the challenge of recruiting to research projects with social care providers. However, we maximised our chances of achieving a diverse sample of participants by recruiting a diverse sample of care providers from rural and densely populated areas, serving a range of age groups, disabilities and health conditions, and including one that served ethnically diverse clients. Methods are discussed further in *Chapter 2*, while *Chapter 6* presents findings related to equality, diversity and inclusion, which are discussed further in *Chapter 8*.

The research team on this project included many female researchers from different parts of the country. The participants and members of the public involved were diverse in terms of gender, religion, ethnicity and where they lived. They were recruited based on their relevant experience and their interest in the project.

Additional information

CRediT contribution statement

Juliette Malley (https://orcid.org/0000-0001-5759-1647): Conceptualisation (lead), Funding acquisition (lead), Methodology (lead), Supervision (equal), Writing – original draft (equal), Writing – reviewing and editing (lead).

Joanne Westwood (https://orcid.org/0000-0002-7560-1391): Methodology (supporting), Funding acquisition (supporting), Project administration (lead), Supervision (equal), Writing – original draft (equal), Writing – reviewing and editing (supporting).

Martha Snow (https://orcid.org/0000-0001-6493-5292): Methodology (supporting), Project administration (supporting), Investigation (equal), Formal analysis (equal), Writing – original draft (equal), Writing – reviewing and editing (supporting).

Nicola Farrelly (https://orcid.org/0000-0002-9006-335X): Methodology (supporting), Investigation (equal), Formal analysis (equal), Writing – original draft (equal), Writing – reviewing and editing (supporting).

Nicole Steils (https://orcid.org/0000-0002-9494-7443): Methodology (supporting), Investigation (equal), Formal analysis (equal), Writing – original draft (equal), Writing – reviewing and editing (supporting).

Catherine Henderson (https://orcid.org/0000-0003-4340-4702): Methodology (supporting), Supervision (supporting), Writing – reviewing and editing (supporting).

Cath Larkins (https://orcid.org/0000-0003-2999-6916): Conceptualisation (supporting), Methodology (supporting), Formal analysis (supporting), Supervision (supporting), Writing – reviewing and editing (supporting).

Acknowledgements

We would like to thank member of the study EAN and members of the PAG who contributed to the design, fieldwork and recommendations for this study.

We are also grateful to the following stakeholders who contributed to the study through their engagement in our feedback sessions and provided feedback on the initial recommendations:

- Daniel Casson, Casson Consulting
- Sue Capstick, Programme Lead: Digital Adoption and Transformation in Regulated Care, South Cumbria ICB
- Sanjeev Kaushal, Director of Care and Quality, Home Instead
- Katie Thorn, Project Lead, Digital Care Hub
- Liz Jones, Policy Director, National Care Forum

Data-sharing statement

All data requests should be sent to the corresponding author in the first instance. Due to the consent process for data collection within this rapid evaluation, only certain data can be shared.

Ethics statement

The project received research governance and ethical approval for phase one on 11 January 2024 via the Health Research Authority (23/HRA/4966, IRAS Project ID: 3347698) and for phase two on 29 May 2024 from the NHS Research Ethics Committee (24/LO/0204, IRAS Project ID: 335300)

Information governance statement

The London School of Economics and Political Science (LSE) is committed to handling all personal information in line with the UK Data Protection Act (2018) and the General Data Protection Regulation (EU GDPR) 2016/679. Under the Data Protection legislation, LSE is the Data Controller, and you can find out more about how we handle personal data, including how to exercise your individual rights by contacting our Data Protection Officer at glpd.info.rights@lse.ac.uk or by telephone (020 7849 4622), or by visiting the LSE website (https://info.lse.ac.uk/staff/divisions/Secretarys-Division/Information-Rights-and-Management/Data-Protection-and-Research?from_serp=1).

Disclosure of interests

Full disclosure of interests: Completed ICMJE forms for all authors, including all related interests, are available in the toolkit on the NIHR Journals Library report publication page at https://doi.org/10.3310/GJJW2821.

Primary conflicts of interest: There are no competing interests.

Copyright and credit statement

Every effort has been made to obtain the necessary permissions for reproduction, to credit original sources appropriately and to respect copyright requirements. However, despite our diligence, we acknowledge the possibility of unintentional omissions or errors and we welcome notifications of any concerns regarding copyright or permissions.

Publications

Snow M. *Implementing Digital Social Care Records in Adult Social Care: Early Findings from a Rapid Evaluation*. International Long-Term Care Policy Network 2024 Conference, Bilbao, Spain, 2024. www.ilpnetwork.org/2024-conference/2024-conference-programme/2024-conference-programme-detailed/

Evaluating the Implementation of Digital Social care Records (DiSCRE). Lunch and Learn Webinar. Preliminary Findings from Phase 2. www.youtube.com/watch?v=MunNdQ2nSQo

Evaluating the Implementation of Digital Social care Records (DiSCRE). Lunch and Learn Webinar. Preliminary Findings from Phase 1. www.youtube.com/watch?v=cG0PmDnV0mo

Steils N. *Evaluating the Implementation of Digital Social Care Records: Blog Post*. www.kcl.ac.uk/news/evaluating-the-implementation-of-digital-social-care-records-webinar

Farrelly N, Snow M, Larkins C, Malley J, Silva Ribeiro W, Steils N, Westwood J. *Findings from a Rapid Evaluation of the Implementation of Digital Social Care Records in England*. Joint University Social Work Association Conference (JUSWA), University of Lancashire, Preston, 25–26 June 2025.

Farrelly N, Walker T, Desai S, Harris B, Hebditch R, Larkins C, *et al. Acting as It Were Possible Every Time: Lessons on Cocreation from a Rapid Evaluation of Digital Social Care Records*. Joint University Social Work Association Conference (JUSWA), University of Lancashire, Preston, 25–26 June 2025.

Snow M, Silva-Ribeiro W, Baginsky M, Di Giorgio S, Farrelly N, Larkins C, *et al.* Best practices for implementing electronic care records in adult social care: rapid scoping review *JMIR Aging* 2025;**8**:e60107. https://doi.org/10.2196/60107.

References

1. Wright J. *Technology in Social Care: A Review of the UK Policy Landscape*. Sheffield: University of Sheffield; 2020. https://doi.org/10.13140/RG.2.2.25146.41922
2. Department of Health and Social Care. *People at the Heart of Care: Adult Social Care Reform White Paper. CP560*. London: Department of Health and Social Care; 2021. URL: www.gov.uk/government/publications/people-at-the-heart-of-care-adult-social-care-reform-white-paper (accessed 6 July 2023).
3. Department of Health and Social Care. *Data Saves Lives: Reshaping Health and Social Care with Data*. 2021. URL: www.gov.uk/government/publications/data-saves-lives-reshaping-health-and-social-care-with-data-draft/data-saves-lives-reshaping-health-and-social-care-with-data-draft (accessed 28 April 2025).
4. Department of Health and Social Care. *Care Data Matters: A Roadmap for Better Adult Social Care Data*. 2023. URL: www.gov.uk/government/publications/care-data-matters-a-roadmap-for-better-adult-social-care-data (accessed 28 April 2025).
5. Department of Health and Social Care. *Joining Up Care for People, Places and Populations: The Government's Proposals for Health and Care Integration*. 2022. URL: www.gov.uk/government/publications/health-and-social-care-integration-joining-up-care-for-people-places-and-populations (accessed 9 April 2025).
6. Department of Health and Social Care. *Next Steps to Put People at the Heart of Care*. 2023. URL: www.gov.uk/government/publications/adult-social-care-system-reform-next-steps-to-put-people-at-the-heart-of-care/next-steps-to-put-people-at-the-heart-of-care (accessed 28 April 2025).
7. Department of Health and Social Care. *Unlock the Benefits of Digital in Care*. Digitising Social Care. URL: https://beta.digitisingsocialcare.co.uk/ (accessed 9 April 2025).
8. Department of Health and Social Care. *Adult Social Care Digital Skills Framework*. Developing Digital Skills. URL: https://beta.digitisingsocialcare.co.uk/develop-digital-skills/digital-skills-framework (accessed 9 April 2025).
9. Department of Health and Social Care. *Digital Working in Adult Social Care: What Good Looks Like*. 2023. URL: www.gov.uk/government/publications/digital-working-in-adult-social-care-what-good-looks-like/digital-working-in-adult-social-care-what-good-looks-like-for-local-authorities-and-care-providers (accessed 9 April 2025).
10. Department of Health and Social Care. *Assured Solutions for Digital Social Care Records*. Digitising Social Care. URL: https://beta.digitisingsocialcare.co.uk/assured-solutions (accessed 9 April 2025).
11. NHS Digital. *Digital Social Care Records Standards*. URL: https://nhse-dsic.atlassian.net/wiki/spaces/DSCR/overview?homepageId=11971330147 (accessed 29 July 2025).
12. NHS Transformation Directorate. *Data Saves Lives Implementation Update*. 2023. URL: https://transform.england.nhs.uk/key-tools-and-info/data-saves-lives/data-saves-lives-implementation-update/ (accessed 9 April 2025).
13. Homecare Association. *New High for Digital Social Care Records Target*. 2024. URL: www.homecareassociation.org.uk/resource/new-high-for-digital-social-care-records-target.html (accessed 8 April 2025).
14. Sollof J. *80% of Providers on Track for Digital Social Care Record by March '25. Digital Health*. 2025. URL: www.digitalhealth.net/2025/01/80-of-providers-on-track-for-digital-social-care-record-by-march-25/#:~:text=social%20care%20records-,The%20digitising%20social%20care%20programme%20target%20of%2080%25%20of%20care,track%2C%20Peter%20Skinner%20has%20confirmed (accessed 8 April 2025).
15. Local Government Association. *Implementing Digital Social Care Records: Lessons Learned and Messages for Commissioners of Adult Social Care in Councils*. URL: www.local.gov.uk/our-support/partners-care-and-health/digital-transformation/implementing-digital-social-care (accessed 9 April 2025).
16. Snow M, Silva-Ribeiro W, Baginsky M, Di Giorgio S, Farrelly N, Larkins C, *et al*. Best practices for implementing electronic care records in adult social care: rapid scoping review. *JMIR Aging* 2025;**8**:e60107.

17. Greenstock J. *Benefits of Digital Social Care Records. Rapid Review*. The Strategy Unit; 2021. URL: www.strategyunitwm.nhs.uk/sites/default/files/2022-03/Benefits%20of%20Digital%20Social%20Care%20Records%20v7_0.pdf (accessed 30 November 2025).
18. Ylönen K. The use of electronic information systems in social work. A scoping review of the empirical articles published between 2000 and 2019. *Eur J Soc Work* 2022;**26**:575–88. https://doi.org/101080/13691457.2022.2064433
19. Kruse CS, Mileski M, Vijaykumar AG, Viswanathan SV, Suskandla U, Chidambaram Y. Impact of electronic health records on long-term care facilities: systematic review. *JMIR Med Inform* 2017;**5**:e35. https://doi.org/10.2196/MEDINFORM.7958
20. Yao R, Zhang W, Evans R, Cao G, Rui T, Shen L. Inequities in health care services caused by the adoption of digital health technologies: scoping review. *J Med Internet Res* 2022;**24**:e34144. https://doi.org/10.2196/34144
21. Greenhalgh T, Wherton J, Papoutsi C, Lynch J, Hughes G, A'Court C, *et al*. Beyond adoption: a new framework for theorizing and evaluating nonadoption, abandonment, and challenges to the scale-up, spread, and sustainability of health and care technologies. *J Med Internet Res* 2017;**19**:e367. https://doi.org/10.2196/jmir.8775
22. Skivington K, Matthews L, Simpson SA, Craig P, Baird J, Blazeby JM, *et al*. A new framework for developing and evaluating complex interventions: update of Medical Research Council guidance. *BMJ* 2021;**374**:n2061. https://doi.org/10.1136/BMJ.N2061
23. Larkins C, Kiili J, Palsanen K. A lattice of participation: reflecting on examples of children's and young people's collective engagement in influencing social welfare policies and practices. *Eur J Soc Work* 2014;**17**:718–36.
24. Malley J, Westwood J. *Protocol: Evaluating the Implementation of Digital Social Care Records*. 2024. URL: https://fundingawards.nihr.ac.uk/award/NIHR163639 (accessed 28 July 2025).
25. McNall M, Foster-Fishman PG. Methods of rapid evaluation, assessment, and appraisal. *Am J Eval* 2007;**28**:151–68. https://doi.org/10.1177/1098214007300895
26. Smith J, Ellins J, Sherlaw-Johnson C, Vindrola-Padros C, Appleby J, Morris S, *et al*. Rapid evaluation of service innovations in health and social care: key considerations. *Health Soc Care Deliv Res* 2023;**11**:1–47. https://doi.org/10.3310/BTNU5673
27. Pettigrew AM, Woodman RW, Cameron KS. Studying organizational change and development: challenges for future research. *Acad Manage J* 2001;**44**:697–713.
28. Stake R. *Multiple Case Study Analysis*. New York, NY: The Guilford Press; 2006.
29. Vindrola Padros C. *Doing Rapid Qualitative Research*. London: SAGE Publications Ltd; 2021.
30. Haberl A, Fleiß J, Kowald D, Thalmann S. Take the aTrain. Introducing an interface for the accessible transcription of interviews. *J Behav Exp Finance* 2024;**41**:100891. https://doi.org/10.1016/j.jbef.2024.100891
31. Vindrola-Padros C, Chisnall G, Polanco N, Vers San Jun N. Iterative cycles in qualitative research: introducing the RREAL Sheet as an innovative process. *Soc Sci Humanit Open* 2022. https://doi.org/10.31219/OSF.IO/9DP2W
32. Ritchie J, Lewis J. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: Sage; 2003. URL: www.youtube.com/watch?v=cG0PmDnV0mo (accessed 30 November 2025).
33. Keith RE, Crosson JC, O'Malley AS, Cromp DA, Taylor EF. Using the consolidated framework for implementation research (CFIR) to produce actionable findings: a rapid-cycle evaluation approach to improving implementation. *Implement Sci* 2017;**12**:15. https://doi.org/10.1186/s13012-017-0550-7
34. Clark SE, Vera San Juan N, Moniz T, Appleton R, Barnett P, Vindrola-Padros C. A systematic review of the methods used in rapid approaches to research and evaluation. *Eval Rev* 2025;**49**:951–68. https://doi.org/10.1177/0193841X251338536
35. Emerson R, Fretz R, Shaw L. *Writing Ethnographic Fieldnotes*. 2nd edn. Chicago: The University of Chicago Press; 2011.

36. Woodward EN, Ball IA. Perspectives on learning to practice reflexivity while engaging communities in implementation science. *Front Health Serv* 2022;**2**:1070444. https://doi.org/10.3389/frhs.2022.1070444

37. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res* 2005;**15**:1277–88.

38. HM Treasury. *The Green Book: Central Government Guidance on Appraisal and Evaluation*. London; 2022. URL: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government (accessed 28 July 2025).

39. Pearce T, Maple M, Shakeshaft A, Wayland S, McKay K. What is the co-creation of new knowledge? A content analysis and proposed definition for health interventions. *Int J Environ Res Public Health* 2020;**17**:2229. https://doi.org/10.3390/ijerph17072229

40. Zakocs R, Hill JA, Brown P, Wheaton J, Freire KE. The data-to-action framework: a rapid program improvement process. *Health Educ Behav* 2015;**42**:471–9. https://doi.org/10.1177/1090198115595010

41. Löhr K, Weinhardt M, Sieber S. The 'world café' as a participatory method for collecting qualitative data. *Int J Qual Methods* 2020;**19**. https://doi.org/10.1177/1609406920916976

42. Institute of Electrical and Electronic Engineers (IEEE). *IEEE Standard Computer Dictionary: A Compilation of IEEE Standard Computer Glossaries*. 1991. URL: https://ieeexplore.ieee.org/document/182763 (accessed 29 July 2025).

43. Oyeyemi A, Scott P. Interoperability in health and social care: organisational issues are the biggest challenge. *J Innov Health Inform* 2018;**25**:196–7. https://doi.org/10.14236/jhi.v25i3.1024

44. Healey J, Davey V, Liddle J, O'Rourke G, Hanratty B, Beresford B. UK homecare providers' views about, and experiences of, digitalisation: a national survey. *Digit Health* 2024;**10**. https://doi.org/10.1177/20552076241255477

45. Bail K, Gibson D, Hind A, Strickland K, Paterson C, Merrick E, *et al*. 'It enables the carers to see the person first': qualitative evaluation of point-of-care digital management system in residential aged care. *J Clin Nurs* 2023;**32**:174–90. https://doi.org/10.1111/jocn.16285

46. Shenkin SD, Johnston L, Hockley J, Henderson DAG. Developing a care home data platform in Scotland: a mixed methods study of data routinely collected in care homes. *Age Ageing* 2022;**51**:afac265. https://doi.org/10.1093/ageing/afac265

47. Kaihlanen AM, Laukka E, Nadav J, Närvänen J, Saukkonen P, Koivisto J, Heponiemi T. The effects of digitalisation on health and social care work: a qualitative descriptive study of the perceptions of professionals and managers. *BMC Health Serv Res* 2023;**23**:714. https://doi.org/10.1186/s12913-023-09730-y

48. Van de Ven AH, Polley D, Garud R, Venkataraman S. *The Innovation Journey. Paperback*. New York: Oxford University Press, 2008.

49. Heifetz RA, Linsky M. A survival guide for leaders. *Harv Bus Rev* 2002;**80**:65–74, 152.

50. Blijleven V, Hoxha F, Jaspers M. Workarounds in electronic health record systems and the revised socio-otechnical electronic health record workaround analysis framework: scoping review. *J Med Internet Res* 2022;**24**:e33046. https://doi.org/10.2196/33046

51. Hanelt A, Bohnsack R, Marz D, Antunes Marante C. A systematic review of the literature on digital transformation: insights and implications for strategy and organizational change. *J Manage Stud* 2021;**58**:1159–97. https://doi.org/10.1111/joms.12639

52. Powell KR, Alexander GL. Qualitative validation of the nursing home IT maturity staging model. *J Gerontol Nurs* 2020;**46**:47–54. https://doi.org/10.3928/00989134-20200605-08

53. Skills for Care. *The State of the Adult Social Care Sector and Workforce in England*. October 2024. URL: www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/publications/national-information/The-state-of-the-adult-social-care-sector-and-workforce-in-England.aspx (accessed 9 April 2025).

54. Department for Science, Innovation, and Technology. *Digital Inclusion Action Plan: First Steps. CP 1267*. February 2025. URL: www.gov.uk/government/publications/digital-inclusion-action-plan-first-steps/digital-inclusion-action-plan-first-steps (accessed 29 July 2025).

55. Law E, Ashworth R. Facilitators and barriers to research participation in care homes: thematic analysis of interviews with researchers, staff, residents and residents' families. *J Long Term Care* 2022:49. https://doi.org/10.31389/jltc.87

56. Scourfield P. Defenders against threats or enablers of opportunities: the screening role played by gatekeepers in researching older people in care homes. *Qual Rep* 2012;**17**. https://doi.org/10.46743/2160-3715/2012.1788

57. Windle N, Alam A, Patel H, Street JM, Lathwood M, Farrington T, Maruthappu M. A retrospective cohort study evaluating the association between implementation of a digital care plan and hospitalization rates for home care residents in the United Kingdom. *Home Health Care Manag Pract* 2023;**35**:123–8. https://doi.org/10.1177/10848223221135560

EME
HSDR
HTA
PGfAR
PHR

Part of the NIHR Journals Library
www.journalslibrary.nihr.ac.uk

Published by the NIHR Journals Library