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Technology and social care: key areas of policy focus in Scotland, Wales and Northern Ireland , 2019-2022

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SUMMARY

This paper is a companion piece to Centre for Care Working Paper 1 'Technology in social care: spotlight on the English policy landscape, 2019-2022' (Whitfield and Hamblin, 2022). As with that publication, we update a working paper from the Sustainable Care Programme [SCP] (Wright, 2020) which explored UK adult social care sector policy and practice related to the use of digital technologies in the period from 2000 to 2019. Here we provide insight into recent policy changes related to the development and implementation of technologies in care arrangements in Scotland, Wales and Northern Ireland (2019-2022), drawing out key areas of focus across the three nations. The paper begins by outlining the differences in the governance related to adult social care more broadly and technology and care specifically in the three nations. We then explore areas of common policy-focus and investment across the three nations, identifying across Scotland, Wales and Northern Ireland, three key areas: 1) inclusion and how to mitigate digital exclusion; 2) co-design and co-production; and 3) data infrastructure projects and data frameworks.

INTRODUCTION

In this paper, we examine policy and governance related to care and digital technologies initiatives in Scotland, Wales, and Northern Ireland. The paper updates a previous output from the Sustainable Care Programme (Wright, 2020), which focused on policy changes between 2000-2019 in England, Scotland, Wales and Northern Ireland and highlighted an 'absence of top-down leadership' across the four nations. Our analysis considers how recent digital strategies and newly launched organisations have changed the policy landscape. It follows on from our report on England (Whitfield and Hamblin, 2022) – as such, here we focus only on Scotland, Wales and Northern Ireland. There are variations across these nations in terms of demand for care provision – for example, Wales is the nation with the oldest population and highest prevalence of disability (Atkins et al, 2021), while Scotland has the lowest disability free life expectancies for both men and women across all nations of the UK (ONS, 2022). There are also differences in population size: population levels are estimated to be: 5,480,000 in Scotland; 3,105,000 in Wales; and 1,905,000 in Northern Ireland – in comparison to the estimated 56,536,000 population size of England. Additionally there are differences in rurality: inequalities related to these differences could be exacerbated by the planned 'digital switchover.' This switchover (planned to be completed by 2025) refers to analogue services – including telecare services – being upgraded to a digital system reliant on the internet.

Out of the four nations, England is the only nation where social care is legislated solely by the UK Government. Scotland, Wales, and Northern Ireland each have their own administrations with devolved responsibility for this policy area. This has led to divergent approaches to the integration of health and social care provision. In **Scotland**, the delivery of social care services is the responsibility of 32 local councils. National Health Services (NHS) in Scotland are divided across 14 territorial boards, seven special boards, and one public health body. Following the introduction of the Public Bodies (Joint Working) (Scotland) Act in 2014, Scotland established 31 Integrated Joint Boards (IJB) to manage health and social care integration. The 31 IJBs broadly align with the 32 local authority areas delivering social care (Taylor and Thomas, 2021). Scotland is considering integrating services further: a National Care Service Bill is currently going through the Scottish Parliament (December 2022). In **Wales**, Statutory responsibility for social care is allocated to 22 local authorities, which commission services to a mixture of public, private, and voluntary providers. In 2003, Wales established 22 health boards to correspond with these 22 local authorities, but later reduced these to seven local health boards and three NHS trusts. To support the integration between health and social care, Social Services and Well-being (Wales) Act 2014 established seven regional partnership boards (Taylor and Thomas, 2021). Contrasting with the systems in the other nations, the social care system in **Northern Ireland** is integrated with health. Combined into Health and Social Care (HSC) Northern Ireland, services are provided through the Public Health Agency and Health and five regional Trusts (and one ambulance Trust) which commission to public, private, and voluntary providers.

All three nations have created organisational bodies with oversight of technologies and social care (Scotland's Digital Health and Care Directorate, Digital Health and Care Wales, Digital Health and Care Northern Ireland), and have developed various strategies and funding programmes. Central to these strategies are assumptions that technology will innovate social care provision, enable independent 'ageing in place', and increase efficiency (with a connected alleviation of workforce supply issues). The following section of our report will go into more detail into the strategies and actions of organisational bodies, indicative examples of collaborations that are happening/ have happened around digital technologies and care, and responses to these government strategies. We then examine three key policy themes that cut across all three nations:

1.   inclusion and tackling inequalities and inequities that might lead to digital exclusion;

2.   co-design and co-production;

3.   data infrastructure projects and data frameworks in the nations.

These themes are not exhaustive (in terms of overall projects across the nations), but provide some insight into strategy focus. In exploring the first theme we understand digital 'inclusion' as having the resources, skills, and confidence to use digital devices and access and understand digital data. Inclusion also requires an absence of digital exclusion, such as structural inequities (the Scottish Government contends that 'inclusive data is intersectional' (Scottish Government and COSLA, 2021)). Co-design and co-production are terms used sometimes inconsistently by governments. Stakeholders in the sector (e.g., Co-production Network for Wales) emphasise that co-production should take place throughout implementation of changes and policy strategy, and should include co-designing, monitoring, and assessing services. One of the requirements for achieving these aims is a coherent data infrastructure. As explored below, the structure of social care and lack of resourcing can obstruct the development and effectiveness of such an infrastructure.

THE GOVERNANCE OF TECHNOLOGY AND CARE IN SCOTLAND, WALES AND NORTHERN IRELAND

This section examines the governance of technology and care in Scotland, Wales and Northern Ireland, and maps how organisations and programmes have approached technology and care. In doing so, we draw on existing definitions of 'governance' which present it as a multidimensional concept, encompassing formal policy (the 'what' of policy aims – i.e., what strategy and policy goals are pursued) and operational policy (the 'how' of policy means – funding and the role of leadership/ stakeholder groups) (Carmel and Papadopoulos, 2003; Carmel et al, 2007). We also bring in critiques of governance proposed by other stakeholders in the sector (e.g., member organisations representing employers and/or users of care services) to consider alternative perspectives on the success of initiatives and strategies.

SCOTLAND

Leadership across policy areas related to care, digital and data is in Scotland provided by the Digital Health and Care Directorate (the Directorate), which has responsibility for policy and strategy, transforming services using technology, and providing expertise around digital information governance and security. The Directorate includes a Technology Enabled Care programme, a Digital Skills and Leadership work area, and a Citizens Engagement cross-cutting theme. Alongside the Scottish Funding Council, the Directorate invested in the **Digital Health and Care Innovation Centre** (DHI) – a collaboration with Glasgow School of Art and the University of Strathclyde, established in 2013. DHI projects related to social care have included: Covid-19 Care in Place (supporting care home staff and residents); the development of a care paradigm (combining technologies with person-centred design); an LED lighting and tracking device for individuals with dementia, and an integrated data store called Backpack. DHI has also collaborated with Construction Scotland Innovation Centre (CSIC) and colleges to develop workforce skills.

Another key organisation working on digital care is the Digital Office for Scottish Local Government. The Digital Office is a group of thirty councils which "*joined forces to drive [...] digital transformation*" in 2015. Their work cuts across themes of digital leadership, digital foundation (focused on building 'strong' technology platforms), digital services, and digital telecare. The organisation also sets expectations around data and security and procurement processes and emphasises the importance of 'consistent collaboration' with digital providers (currently they have a partnership with Microsoft). The **Digital Telecare** theme of the Digital Office was established by the technology enabled care (TEC) programme "*to explore what would be needed to support Scottish Partnerships transition to a digital telecare service*". Three phases of transition are referred to on the Digital Telecare website: Discovery, Planning, and Implementation. Other initiatives which Digital Telecare has developed are the Digital Telecare Maturity Assessment tool, the Digital Telecare Implementation Awards Scheme, and the Digital Telecare Security Assessment Scheme.

The Scottish Government has also funded projects focused on digital infrastructure. In 2019, the Government established the **Scotland 5G Centre** to act as a 'national hub' collaborating with stakeholders across industry, technology providers, and academia. The Centre has regional hubs with emphasis on different areas of industry, and partners with organisations such as Nokia, Vodafone, and Ericsson. A further government initiative focused on infrastructure is **Connecting Scotland** – set up alongside councils and the Scottish Council for Voluntary Organisations (SCVO) during the Covid-19 pandemic. Connecting Scotland provides technologies and digital skill development for individuals across Scotland who are on low incomes and are digitally excluded. Projects have focused on supporting individuals isolating due to the pandemic, digital inclusion in care homes, training Digital Champions, and improving employability.

This variety of stakeholders involved in digital care technologies across Scotland can lead to tensions in innovation and implementation at scale (demonstrating a continuation of issues related to leadership highlighted by Wright (2020)). In 2018 the Scottish Parliament's Health and Sport Committee published a report '**Technology and Innovation in Health and Social Care**' which highlights the *"limited uptake of technology enabled health and social care initiatives and a lack of deployment at scale"* and a necessity to "*move from board-level implementation towards a once-for-Scotland national system*" (Health and Sport Committee, 2018: 16). Since 2018 the Directorate has published regular strategies in partnership with **COSLA**, the 'voice of Local Government in Scotland'. A 2018 Digital Health and Care Strategy 'Enabling, Connecting and Empowering' (Scottish Government and COSLA, 2018) was 'refreshed' in October 2021, when the Directorate published another **Digital Health and Care Strategy**. The 2021 strategy (Scottish Government and COSLA, 2021) includes three aims– 1) giving citizens greater control over their data; 2) providing person-centred services with 'ethical digital foundations'; 3) enabling care planners and researchers to draw on data and develop innovative systems. In November 2022, the Directorate and COSLA co-authored a **second report** updating on the progress across themes aims; the report notes that increased economic pressures have necessitated some scaling back (for example, of digital prescribing) and prioritisation of system pressures.

Various organisations published responses to the 2018 and 2021 Digital Health and Care Strategies. Regarding the 2021 refreshed strategy, **ALLIANCE** (Health and Social Care Alliance Scotland) notes a number of areas of the strategy that could be clarified or strengthened. For example, the 'social' aspect of care should not be lost within a focus on service delivery and individuals need to be taken into account who, even after receiving support with access and skills training, may have difficulties using technology (ALLIANCE, 2021). The ALLIANCE response also emphasises that a human rights approach needs to be 'explicitly embedded' in implementation – this necessity is similarly highlighted in a paper by **Scottish Care** (2019a) (a membership organisation providing 'a Scottish voice' for providers, workers, and those using care services). Their paper questions whether technology is "*the neutral paragon of positive human rights that some enthusiasts and 'tech evangelists' have suggested*" (2019a: 10). In an **independent review** commissioned by the Scottish Government into Adult Social Care (and completed in 2021), author Derek Feeley took a 'human-rights based approach.' The report published about the review states: "*[t]o move my arms and legs, go to the bathroom, take a shower and exercise when I choose; those things are fundamental rights for me to be able to live independently [...] I want everything in the system to change.*" Additionally, the 2021 Digital Health and Care Strategy does reference human rights, although with no specific actions regarding technology and care.

WALES

In Wales, the Special Authority called **Digital Health and Care Wales** (DHCW) was established in 2021 to replace the Wales Informatics Service and provide more of a system-wide approach (Downey, 2021). DHCW acts as a national body with responsibility for delivering digital and data health and care services. The organisation published a Digital Report in 2022 (underpinned by the policy documents '**A Healthier Wales**' and the 2021 '**Digital Strategy for Wales**') listing strategic priorities of:

a) enabling digital transformation;

b) delivering high quality products and services;

c) expanding content and availability of digital records;

d) driving value and innovation;

e) acting as a 'trusted' strategic partner for stakeholders.

These aims are contextualised within the Welsh Government's broader aims, such as reducing health inequalities and integrating community and primary services, and align with the 2021 Digital Strategy for Wales. While the strategy does not focus specifically on industries, it does note the recruitment of a Chief Digital Officer for Local Government and outline general ambitions towards improving digital services, inclusion, skills, economy, connectivity, and data and collaboration.

Other areas of investment since the publication of the Digital Strategy for Wales include creation of a 'one-stop-shop' for resources, '**DigitalHealth.Wales**', a 'shop' which has care within the remit of their programmes. The two leading programmes are **TEC Cymru**, established in 2018, and **Digital Health Ecosystems Wales** (DHEW). TEC Cymru is hosted by the Aneurin Bevan University Health Board and provides resources related to areas of practice including video consultation, telecare, telehealth and assistive technologies. Within the category of telecare, TEC Cymru provides assistance, including impartial advice, to support the migration from analogue to digital – their website notes that there are "*99% of in-home telecare alarms in Wales using the analogue network*" – and information on telecare products available. **DHEW** provides brokering between industry technology companies and public health and care services, with an aim to "*make it easier and faster to adopt digital healthcare technologies*". A care-related project within the DHEW programme is a pilot providing mental health monitoring in Hengoed Care Homes (in Swansea) with the company Spirit Health. Funding for the pilot came from the Welsh Government's Digital Solutions Fund Programme, awarded in 2020. Another key organisation funded by the Government to support technology adoption in the sector is **Health Technology Wales** (HTW) , an independent organisation hosted by NHS Wales and established in 2017 to appraise technologies and provide recommendations. In July 2022, it launched a call for digital solutions – Chair of HTW, Professor Peter Groves, commented that "*by submitting a digital health technology to our open topic call you are helping to shape the future of our health and care services.*"

The Welsh Government has not published a digital care strategy since 2015, but in alignment with the aims of the Digital Strategy funding has been allocated by the Welsh Government towards connectivity and workforce skills. With regard to the former, in 2022 the Welsh Government's Local Broadband Fund allocated £9 million towards improving internet access for local authorities and social enterprises in Cardiff, Newport, Vale of Glamorgan, and North Wales. To support skill development and training, in 2021, a Masters course in Leading Digital Transformation was created in collaboration with Health Boards and social care organisations at the University of South Wales. The course includes places part-funded by the Welsh Government for applicants from Welsh health and social care organisations. A **similar course** runs at Swansea University, in the All-Wales Intensive Learning Academy for Innovation in Health and Social Care.

In 2022 DHCW ran a scrutiny consultation to consider the progress of the organisation on its objectives, which various stakeholders responded to. One organisation which responded is the **Centre for Digital Public Services**, (CDPS) an 'arm's length' organisation launched as part of the Digital Strategy in 2020. The 2021 'Digital Strategy for Wales' refers to CDPS as "*fundamental to our plans to improve capability, embed consistent digital service standards and support public services*" and notes that it is already "*offering practical help and training to design services based on the needs of the user*" (Welsh Government, 2021a). In their response to the consultation on the work of DHCW (CDPS, 2022) the CDPS comments on the work processes within the DHCW, recommending 'communities of practice' to co-design solutions, share and address problems, and build trust through work processes. They also recommend that the DHCW highlight the contribution of the organisation to Wales' Digital Strategy – and ensure that approaches are "*'working with' rather than taking the view that 'we are doing this for you' or 'to you'*" (CDPS, 2022).

Other responses to the consultation suggest a lack of clarity around the role of DHCW. **Digital Inclusion Alliance Wales** (DIAW) notes that across the health boards and social care organisations, progress has been made, yet "*[i]t is not always clear what role DHCW has played in any of these projects and programmes*" (DIAW, 2022) and emphasises that DHCW should lead by example in their approach to digital inclusion. DIAW also interrogates the aims of the DHCW to provide 'first-class' services: "*DIAW would question whether this aim is achievable when a significant proportion of the population who most need these services are not able to access them*" (DIAW, 2022). **Care & Repair Cymru**, a national charity championing housing needs of older people in Wales, provides recommendations echoing those of DIAW and CDPS, with an emphasis on inclusion and co-design, and also highlights a lack of transparency and communication failings: "*Care & Repair Cymru were not fully aware of the progress on DHCW [...] as it has not been widely communicated with either stakeholders or the public*" (Care & Repair Cymru, 2022). Another response – from **Social Care Wales** (an organisation sponsored by the Welsh Government to provide regulation of, and support for, the early years and social care workforce) – notes "*[t]he name of the organisation can be misleading for the social care sector, who may have anticipated the same level of support that is provided to NHS bodies*" (Social Care Wales, 2022b). Further, they suggest that lack of capacity within DHCW can limit social care initiatives; reflecting the findings of the 2022 Digital Health and Care Scotland and COSLA report that system pressures impede strategic aims.

NORTHERN IRELAND

The Northern Ireland government implements digital care strategies through the national body **Digital Health and Care Northern Ireland**, part of the broader HSC system These strategies are outlined in the 2022 document **Digital Strategy Health and Social Care Northern Ireland** 2022-2030. The strategy extends the work of the 2016 'eHealth and Care Strategy' and supports the 2017 publication 'Health and Wellbeing 2026 - Delivering Together.' The 2022 Digital Strategy expands on the importance of data and technology through four enablers:

1. digital leadership and culture;

2. digital specialist workforce;

3. management and governance;

4. infrastructure and programmes.

The Digital Strategy also outlines challenges to delivery of rebuilding services which were negatively impacted by the Covid-19 pandemic, funding constraints, and ecosystem challenges. Describing the ecosystem of health and social care in Northern Ireland as 'large and complex' involving multiple key partners, the strategy notes "*our digital transformation agenda must reflect the needs of these groups and this digital strategy aims to ensure those needs can be met*" (HSC, 2022a: 60). Included in these groups are the population (using health and social care services), staff, universities and higher/ further education institutions, arms-length bodies, digital suppliers, and sector partners. The report details how each group will be impacted by, and will contribute to, the digital strategy. For example, engaging suppliers and utilising their expertise is connected with informed digital transformation, improved solutions, and increased value for money. The document also outlines how the strategy will be implemented through a Digital Charter, which includes committing to establish digital networks, develop digital careers, and use collaborative working. Stakeholders are to be involved in designing these commitments further.

Alongside the Digital Strategy, HSC published a Cyber Security Strategy, Digital Innovation Strategy, and Data Strategy. The Cyber Security Strategy notes that cyber security relates to information, applications, infrastructure, and physical locations of technology assets. Key to delivering the strategy is establishing a **Cyber Security Operations Centre** (SOC) with objectives of the SOC of: swift response to security breaches; training on cyber skills; review of infrastructure; monitoring risk; and procuring technologies. Another strategy document – the **Digital Innovation Strategy** – also includes setting up a new body in their aims, referred to as a HSC Digital Innovation Hub. Innovation is here defined as "*new ideas, practices or objects whose application leads to added value, such as better health and care outcomes or savings*" (HSC, 2022c: 3). The strategy notes that the hub will have "*clear and transparent governance and will engage with the ecosystem through its horizon scanning function*" (HSC, 2022c: 3). The fourth strategy document released in 2022 by the HSC is a **Data Strategy**. It refers to principles of using data to drive innovation, improve service-user experiences, support HSC staff and services, and ensure safe and secure use of information – set to be delivered through another new

body, the HSC Data Institute. The enablers of these ambitions are listed as people, population and culture, information governance, data-enabling infrastructure and technologies, and centralisation and interoperability of data. Central to the latter is the **Encompass** programme, described in the below section on 'Data infrastructure'.

Photo by Centre for Ageing Better

All four of these strategy documents connect their aims to Health and Wellbeing Strategy's 'quadruple aim', listed as: improving health of citizens, improving quality and experience of care, supporting and empowering staff, and ensuring sustainability of services. The Health Minister Robin Swann has said that "*[t]his new landmark strategy has the potential to change how the general public use health and social care services in Northern Ireland*" (quoted in Say, 2022b). Yet there are obstacles to the strategy's aims towards digital innovation. The chief digital and information officer for health and care, Dan West, has emphasised need for a 'cultural pivot.' West notes that "*all the techy stuff is a bit irrelevant if we can't foster the culture change needed in the system*" (quoted in Say, 2022a). Further, innovative approaches may be obstructed by, arguably necessarily, short-termist thinking in the sector. A report by the Northern Ireland Confederation for Health and Social Care and Health Innovation Research Alliance Northern Ireland (NICON and HIRANI, 2022: 16) highlights how challenges in the sector increases the "*drive and focus of Health and Social Care Trusts onto immediate service delivery and away from a longer-term transformation underpinned by more innovative programmes*". It does, though, suggest that this "*pressure and the lack of resource can also act as a catalyst for a greater degree of 'pull' in the system for productivity enhancing technologies and solutions*" (NICON and HIRANI, 2022: 16) a perspective demonstrating the prominence of a market logic in the sector.

KEY THEMES

Drawing on the above mapping of the governance of digital care, we now turn to three key themes: **1) inclusion and equality**; and **2) co-design and co-production**, **3) data infrastructure**. The first two themes are more normative – focussing on the ambitions behind that government strategy and implementation. To refer back to our earlier definition of governance, these themes cover the 'what' of policy aims. The third section is more related to the 'how' of policy *means*: we analyse the role of data infrastructure in facilitating government ambitions – in achieving the 'aims' in the first two sections, but also in improving quality of care more broadly.

INCLUSION AND EQUALITY

Across the three nations, digital inclusion and equality of access are evident policy priorities. The Scottish Government's TEC Programme published a '**Digital Citizen Delivery Plan 2021/2022**' outlining four priorities:

1. Address inequalities and promote inclusion, referred to as a "high-level aspiration" (2021: 10) – with a particular focus on learning disabilities, mental health, suicide prevention, and drug related deaths.

2. Engage citizens and staff through participation and co-design, using the Scottish Approach to Service Design.

3. Redesign services to improve access and wellbeing, including promoting sustainable business and collaborating with the TEC Housing programme.

4. Innovate for transformation – identifying service innovations and funding Test of Change activities through collaboration with the DHI.

Inclusion is referred to in this plan as part of the 'how' (the 'principles of approach') justified by the 'why' (citizens benefits) which includes addressing social inequalities. The 'what' – areas of activity – in relation to these principles and benefits, are factors such as data and information, education, innovation and research, service redesign, engagement, workforce development and funding. The **2023 Health and social care: data strategy** relates data to inequalities in two ways: first, it notes that data might "*exacerbate existing inequalities*", and emphasises a commitment to "*comparable ease of access for those without digital means and those with digital access*". Second, it refers to data as providing a "*wealth of opportunities for research and innovation that can [...] assess progress towards reducing inequalities of access, experiences and outcomes*".

Among initiatives in Scotland focused on inclusion and inequalities are the **Discover Digital Project**, managed by ALLIANCE. The project has included funding for 'seldom heard communities' and Participation and Inclusion Grants. Another collaboration has been an action plan for care homes titled 'Connecting People Connecting Services' (Digital Health and Care Scotland, TEC, & COSLA, 2020). The emphasis of this plan is on inclusion through improved connectivity and access to digital services, social connections and (physical and emotional) activities for residents, wellbeing support for staff, and digital skills and confidence of residents and staff. Forms of technology to achieve these aims vary from care management software (the Turas Care Management Tool), Telecare, Care Homes Assessment Tool (CHAT), video messaging software vCreate, social media, online therapy services, and the video appointment service 'Near Me.' 'Near Me' is cited as a success story in the Digital Health and Care Strategy, viewed as particularly effective for alleviating digital exclusion in rural areas. The Scottish Government now aims to "*make it a choice that is available in every relevant health and social care interaction for every member of society*" (Scottish Government, 2021f) (although the Equality Impact Assessment of Near Me noted that online consultations should not be default, as connectivity issues can be a barrier).

Wales too has been working to address issues related to digital inequalities and care. In 2019 the Welsh Government funded a programme – running until 2025 – called **Digital Communities Wales** (DCW). Carried out in collaboration with Swansea University, the Good Things Foundation, and the development agency Cwmpas, DCW supports organisations to develop and deliver digital inclusion practices. Cwmpas, under its previous name Wales Co-operative Centre, also published a '**Digital Inclusion Guide for Health and Care in Wales**' in 2019 providing practical steps that organisations can take towards inclusivity. These steps are mainly focused on NHS health boards, including signing the DCW Digital Inclusion Charter – launched in October 2022. When DHCW signed the charter, the chair – Simon Jones – said "*what we want to do in Wales is make inclusion an intended consequence, not exclusion an unintended consequence of digital innovation in health care*" (Health Tech Newspaper, 2022).

Another part of DCW is the **Digital Inclusion Alliance for Wales** (DIAW – one of the organisations which responded to the scrutiny consultation in the above governance section). DIAW is a network of 85 organisations with a 'firm commitment to social justice and equality.' The group outlines the five priorities for promoting digital inclusion as embedding digital inclusion across all sectors, including social care; mainstreaming digital inclusion; addressing data poverty; prioritising digital skills; and setting digital living standards and co-production approaches. In addition, the DIAW states an intention to support the recommendations made in previous reports – the Digital Inclusion in Health and Care in Wales report, published in 2018 by Cwmpas and Leave No-One Behind, from the Older People's Commissioner for Wales. The document emphasises that business cases for digital investment in public sector organisations should state how digital inclusion will be supported and "*how service design and evaluation will place service users' experience at the centre – including users with low or limited digital skills*" (Digital Inclusion Alliance for Wales, 2021: 2).

"*Empowerment and digital inclusion*" are also cited as an ambition in **Northern Ireland**'s Digital Strategy. The strategy works towards "*digital inclusion and reduction in digital inequalities with improved access to services, including analogue options*" (HSC, 2022a: 28). In general though, inclusion is less of a focus in the Northern Irish strategy documents than factors such as innovation (and less than in Wales and Scotland's approach to digital care). Patricia Donald, from the advice service Advice NI, calls for a digital inclusion plan for Northern Ireland: "*[a] plan that will build on the excellent work that organisations such as Advice NI, Disability Action, Libraries NI, Supporting Communities and others are already doing to help close the digital skills gap*" (Donald, 2022). The Northern Ireland Assembly's Research and Information Service has similarly highlighted the digital divide in Northern Ireland across demographics, infrastructure,

and access. The blog emphasises the growing rural population in Northern Ireland, and notes that "*digital inclusion is critical in the local delivery of health and social care.*" In 2010, in research carried out by Citizens Online – commissioned by the Department of Finance Digital Inclusion Unit and BT – the 'business case' for digital inclusion was put forward (BT, 2017). The report covers cost savings, productivity increases, and qualitative benefits in various industries, including social care provision.

CO-DESIGN AND CO-PRODUCTION

The second key area of commonality between the policy approaches in Scotland, Wales and Northern Ireland is co-design and co-production in care and technology services, and the potential for these approaches to improve care quality. Starting with **Scotland**, the Digital Health and Care Innovation Centre has had a particular focus on users: the **website** states that: "*Everything we do revolves around collaboration and co-design!*" The project '**Digital Empathy**' demonstrates this ambition. Using participatory methods, the project explored how empathy factors in to forms of technology such as video consultations used by individuals with long term health needs. The project primarily emphasises health services, but also notes that consideration of the entire care 'ecosystem' is important to make systemic changes to 'empathic' technology use.

Scotland's Digital Health and Care Directorate also developed a standard around digital participation. The charter pledges to skill up and support staff, support Scotland, support a common language of participation, and coordinate activities. A fund to the charter was established in 2014 in partnership with BT and telecommunications and infrastructure organisation Cellnex. It has progressed through eight funding rounds, supporting over 120 projects. The Directorate's Digital Health and Care Strategy (Scottish Government, 2021f: 15) centres the user: "*we will ensure that we are designing services around the needs of the people who use them and will support people to play a full and active part in this process from the outset*" – and uses the **Digital Scotland Service Standard** (Scottish Government, 2021c). This standard emphasises the importance of placing users at the centre of service design, and highlights positive impacts of participation and co-design on quality of care: *"[t]esting your assumptions early, with the people you're trying to reach, reduces the risk of building the wrong thing";* and revisiting understanding of users will be more likely to lead to a product *"fit for purpose"* (Scottish Government, 2021c). In addition, the strategy refers to the **Scottish Approach to Service Design** (2019d), a framework outlining principles and tools to assist organisations in prioritising co-design. This framework is referred to in the **TEC Programme** described above and in the pathfinder programme **Transforming Local Systems**, established in 2019 with a focus on the role of technology in prevention.

Some organisations have questioned the pragmatics of user involvement in the Scottish Government's strategy. Scottish Care published a report in 2018 responding to the Government's draft strategy, commenting that: "*it is unlikely that many would find fault with the overarching aim of the Scottish Government's Digital Health and Care Strategy to place the individual at the centre, but what does that practically mean*" (Scottish Care, 2019a: 34). ALLIANCE responded to the Digital Health and Care Strategy by highlighting the risk that citizen involvement could become 'tokenistic', the absence of bespoke support for unpaid carers, and the need for open data principles and good digital practices (ALLIANCE, 2021: 6). As an example of the latter, they cite **ALISS** (A Local Information System for Scotland). ALISS is part of ALLIANCE and is funded by the Scottish Government to provide co-produced resources on services, groups, activities, and digital technologies. In 2022, the home technology company TL Tech received funding from Innovate UK to develop a version of ALISS accessible via Amazon Alexa devices (such devices are also popular with local authorities and Government in England, despite concerns around Amazon's ethics (Wright, 2021; Whitfield and Hamblin, 2022)).

In **Wales**, there is a link between the focus on inclusion and involvement in the DCW programme and co-design and co-production. The training manager at DCW, Laura Philips, refers to the hope that through the programme, "*the care workforce can take on the responsibility of learning about care enhancing technology, which will then see digital skills and know-how trickle down to individuals across Wales*" (Social Care Wales, 2022c). The organisation CDPS referred to in a previous section emphasises user-centred development of technology: Chief Executive Harriet Green describes the aim of CDPS as "*the delivery of safe, secure, easy-to-use public services that are designed around the needs of the user*" (**Trendall**, 2020). To achieve their aim of community engagement, the organisation has collaborated with the independent organisation Co-production Network for Wales. CPDS also follows Digital Service Standards, categorised into meeting user needs, creating good digital teams, and using the right technology. Within these categories are aims such as promoting the Welsh language, use scalable technology, and consider ethics. Unlike many other organisations referred to in this paper, the CPDS avoids terminology of 'transformation', as Green comments, "*we're wary of using that word because, for us, this is a forever thing: we just need to keep getting better and better – it is not a transformation that's going to happen by a certain date; it's a forever thing*" (Trendall, 2020).

In **Northern Ireland**, the emphasis on co-production and co-design is less evident in the various strategies than in Wales and Scotland, but still present. In the Innovation Strategy co-production is referred to as *"central to the Digital Innovation Hub's activities"* (HSCc, 2022: 25) and the strategy itself is described as a product of co-design practices with stakeholders. The Digital Strategy document refers to the challenge of improving sustainability of care services, and notes an intention to "*work with our people and the Northern Ireland population to coproduce solutions that meet this challenge, empowering people to manage their wellness and health care.*" Co-design is emphasised – the strategy has an ambition to work with focus groups to co-design solutions, and "*[e]mbed our people in the design and delivery processes to place their experience and insights at the heart of the digital experience*" (HSC, 2022a: 7).

Northern Ireland's Department of Health also published '**Co-production Guide: Connecting and Realising Value Through People**' in collaboration with groups across the health and social care sector in 2018. The Department has a statutory duty to consult stakeholders, and a goal to *"support transformational change through a co-productive approach and promote the opportunity for all sections of the Northern Ireland community to partner with health and social care staff in improving health and social care outcomes"* (Department of Health, 2018: 7). The guide distinguishes between co-

production, as a person-centred approach enabling collaboration, codesign – where teams of partnerships develop and renew pathways and services models – and co-delivery, practices which empower multidisciplinary teams to integrate solutions. Care technologies and data are not explored in detail in the report, although it does refer to 'utilised enabling technologies' as one of the factors of the 'Citizen Powered Health and Social Care System' which the report aims to establish by 2026. This entails a system whereby: "*people are enabled to personalise their health and wellbeing goals, track and analyse their own health data*" (Department of Health, 2018: 15). Collecting and sharing data, as discussed below, is thus seen as an enabling factor of involving people in their care.

DATA INFRASTRUCTURE

Policy across the nations has focused on issues related to data and its relationship to social care in various ways. In **Scotland**, the emphasis has been on harnessing the potential benefits of collecting and analysing data for social care provision, but with a focus on ethical approaches and empowering citizens to better understand the information collected about them. The Scottish Council for Development and Industry (SCDI), a membership network supporting public and private sector industry across Scotland, responded to the planned Data Strategy in their publication on the data gap. Their report highlights the gap between "*data we collect, utilise or share'* and *'data we need and could collect, utilise or share*" (SCDI, 2021: 1), and emphasises that closing this gap requires funding across areas of strategy, culture and leadership, and skills and infrastructure. In 2023 the **Health and social care: data strategy** was published, coauthored by the Directorate and COSLA. It refers to principles of data collection – whether collection is beneficial, responsible, accountable, insightful, inclusive, and necessary – and acknowledges that *"to truly achieve our vision will require time and incremental change as funding and resources permit."* The strategy document also connects data to digital inclusion, contending that use of data cannot be 'maximised' if individuals are unable to access or 'meaningfully use' digital technologies.

The 'human rights based' approach of the Health and social care: data strategy was informed by a year-long Data Dialogues project with the innovation agency Nesta. This project included a collaboration focused on 'non-medical' aspects of wellbeing – '**My World, My Health**' – produced by ALLIANCE and the DHI, which had specific aims around equality and involvement of users of care services. The report published on the My World, My Health project emphasises tackling discrimination in data collection and use (a finding echoed in the Nesta summary report (Nesta, 2021) of the overall Data Dialogues project). The report provides insight into differing perspectives of minoritised groups on sharing data: LGBTQIA+ participants 'seemed more comfortable' sharing data with professionals than family members, while the views of ethnic minorities were the other way around. Participants also expressed fear that sharing of personal information could worsen stigma, that data collection could reduce social interaction, and that data could contribute to a shift in power towards a paternalistic state. In addition to feeding into the Health and social care: data strategy, findings from the Data Dialogues project have been incorporated into the **Data and Intelligence Network: ethics framework**. The framework provides direction regarding 'moral dilemmas', security, transparency and monitoring, and engaging citizens in decisions related to their data.

Wales has focused on creating standards related to data collection and use in social care and as well as creating the infrastructure to collect and share data with health – an ambition which has sometimes been hampered in practice. Sharing information between health and care as a means to integrate the two systems has been a priority in Wales for some time, and Digital Health and Care Wales has a focus on data and infrastructure across their programmes. The Special Authority collaborated with Social Care Wales, Public Health Wales, and **SAIL Databank** (Secure Anonymised Information Linkage) to set up the Networked Data Lab in Wales. Social Care Wales has also developed a National social care data portal for Wales – a platform providing data across adult and early years care – and launched a National Social Care Data Portal. Social Care Wales' Statement of Strategic Intent, published March 2021, outlines intentions to improve data and data skills, and develop a 'strong data culture' with ethical practices, standards, and design processes. Issues of equality and inclusion come into these ambitions. The statement notes that prioritising data "*gives a better understanding of inequalities in care and outcomes that must be addressed*", and describes a 'vision' that users of care services can say, *"I feel like my voice is finally being heard [...] I am able to co-produce my care plan based on my needs, and the data recorded about me supports that"* (Social Care Wales, 2021).

This sharing and integration of health and social data has, however, been stymied by a number of factors. A 2022 Cabinet Statement by Eluned Morgan MS (Minister for Health and Social Services) highlighted the fragmented nature of data across health and care systems – an issue which is "*not unique to Wales*" (Morgan, 2022) – as a barrier. In particular, the roll-out of the Welsh Community Care Information System (WCCIS), which aims to create shared electronic records across health and social care, has faced difficulties. The 2015 Digital Health and Care Strategy described the purpose of the Welsh Community Care Information System (WCCIS) as to "*allow staff working in health and social care to use a single system and a shared electronic record of care*" (Welsh Government, 2015: 8). In 2020 though, an audit report concluded that the Government's 'vision' for the initiative was "*still a long way from being realised*" and costs had exceeded expectations (Wales Audit, 2020: 6). While there has been some progress – at the time of the audit, the system was used by 13 local authorities (out of 22) and it is now used by 18, as well as seven of the Welsh Health Boards – some councils have expressed uncertainty about the WCCIS (Hearn, 2022). In 2021, Neath Port Talbot Council committed to develop their existing 'Social Services Information System' rather than adopting the WCCIS, referring to the latter as not a *"viable option"* with the *"vision of integrated working [...] still in its infancy and unproven on a large scale"* (Neath Port Talbot, 2021).

In **Northern Ireland** too there are aspirations related to integrated health and social care records. Indeed, the ambition of HSCNI to become the first of the four nations to use single electronic patient records, integrated across health and care, is set to be facilitated by partnerships with tech companies. The ten-year Encompass Programme will use a platform powered by US firm Epic Systems. Epic was awarded a contract of £275 million in 2020. Dr Michael Quinn, the head

of clinical informatics at HSC, said: "*£275m is a lot but its spread over a decade and it's less than 1% of overall budget in NI health and care [...] it's a transformational investment that will underpin of health and care in NI for the next decade*" (quoted in Hoeksma, 2022). The ambitions behind data integration seem more generally related to wellbeing and sustainability of the system, as opposed to specifically themes such as inclusion, equality, and co-production. From the perspective of the contracted provider Epic, the benefits will be around transformation of provision and improved outcomes which "*allow care providers to work together more effectively and efficiently*" (Epic President Carl Dvorak, quoted in Epic, 2020).

Previous adoption of Epic's systems have faced issues. In 2014, Cambridge University Hospitals switched from paper records to Epic's software, and the system was criticised as 'unstable' and costly (Naughton, 2014). In addition, the complexity and changeability of organisations involved in delivering services data systems is evident in the case of Epic. Data integration is provided by the Lyniate Rhapsody (currently used in 79 NHS Trusts) – a US interoperability company with the integration products Rhapsody and Corepoint. Lyniate Rhapsody merged with 'healthcare terminology solutions' company CareCom and data exchange provider NextGate in 2022 (Lydon, 2022). The Programme is also supported by the digital health consultancy firm Cloud 21, and the healthcare technology firm Tegria, based in the US. The international managing director of Tegria, Justin Jozwik, has said: "*together we are well-placed to support HSCNI's Encompass programme and provide high quality strategic guidance, as well as the practical expertise that Tegria and Cloud21 are well-known for*" (Tegria, 2022). However, the founder of Tegria – a Catholic, not-for-profit health care system in the US called Providence – is already well-known for other reasons: in 2022 the organisation controversy over 'aggressive' spending decisions and charges for low-income patients (New York Times, 2022).

DISCUSSION

This paper has provided an overview of developments at the intersection of digital technologies and social care in Scotland, Wales, and Northern Ireland. Rather than evaluating programmes and strategy aims, we have provided a thematic analysis of the policy direction in each nation – including an overview of governance related to technology and care, alongside key stakeholder organisations, strategies, and funding sources. Digital technology tends to be seen as a fast-paced area of development, while public sector contracts and commissioning practices are much slower moving (Wright, 2021) and there is a somewhat confused territory of publicly funded organisations established to implement and assess technology. Fast development of technology also introduces new risks; it remains to be seen whether UK Governments can not only keep up with developments, but can do so in a way that ethically regulates technology and ensures service stability for individuals with care needs. There are also tensions between digital innovation ambitions and system pressures. The 2022 Digital Health and Care Scotland and COSLA update on Scotland's Digital Strategy progress demonstrates that strategic intentions can be impeded by wider economic pressures. Reflecting this suggestion in the context of Wales, Social Care Wales (2022b) emphasises that lack of capacity within DHCW can limit social care initiatives. Similarly in Northern Ireland, where there are various interwoven strategies related to digital and care

strategy, it is unclear whether there is capacity or funding to deliver on these ambitions. In addition, Scotland and Wales in particular have multiple organisations driving digital care innovation and implementation, a factor argued to contribute to fragmentation and challenges to delivering technologies in care 'at scale'

Photo by Peter Kindersley

We have also explored areas of commonality across the three nations in more depth across three key areas. The first area is government strategies and funding decisions which prioritise **inclusion**. In Scotland, recent documents emphasise the potential for discrimination (in the Data Dialogues project) and 'inherent biases' of technologies (in the 2021 Digital Health and Care Strategy). The Scottish Government has also funded projects focussing on inclusion and equality, notably the Discover Digital Project and Connecting People Connecting Services, which explores digital exclusion. Aspects of equality are incorporated into the Government's strategy in the consideration of human rights. In Wales, DHCW has also emphasised inclusion, signing the Digital Inclusion Charter and funding projects carried out by Cwmpas and Digital Inclusion Alliance Wales. The latter has, however, highlighted that the DHCW could play a more explicitly active role in promoting inclusion. While the Northern Ireland Government cites tackling digital inclusion and digital inequalities in the HSC digital strategy, policies have not yet unpacked these issues or outlined how they might be tackled.

A further theme highlighted in this report is **co-production and co-design** – alongside arguably less rigorous ambitions to increase user participation and involvement. In Scotland this theme is formalised in the Scottish Approach to Service Design, the Digital Scotland Service Standard, and the Digital Participation Charter, and has been enacted through the TEC Programme and DHI projects. The Government's integration of the user into digital strategies has been viewed positively, albeit with the caveat that future strategies will need to outline what 'citizen involvement' entails (ALLIANCE, 2022). In Wales, the Government has promoted user involvement through the DCW programme and the CDPS. The latter follows Digital Service Standards similar to those utilised in Scotland. The Government in Northern Ireland presents co-design in more of a utilitarian way – as an aspect of innovation, and as a means of 'realising value' (Department of Health, 2018).

The final theme we have looked at is data infrastructure, an area that we approach as the 'how' of governmentality – which may be used to achieve the aims of inclusion, equality, co-design, and co-production. Data infrastructure has been prioritised across Scotland, Wales and Northern Ireland, as part of the commitment of their respective Governments towards health and care service integration. The Scottish Government's data strategy is being developed with input from a public consultation; the summary and response to the consultation emphasises how data can 'empower' stakeholders. The Welsh Government reiterated its aim to integrate health and care data using WCCIS (despite a 2020 Wales Audit report suggesting that *"the prospects for full take-up remain uncertain"* (Wales Audit, 2020: 22). In Northern Ireland, data integration seems more feasible given the nation's joined up systems of health and social care, and the small size of the population relative to the other nations. Large contracts to (primarily US-based) technology firms have recently been awarded as part of the Northern Ireland Government's flagship Encompass project to drive this agenda forward.

While these themes provide some comparative insight into policy direction and implementation of technologies, measuring 'success' across the nations is challenging. In relation to themes of inclusion and co-production, it is often unclear how strategies across the three nations regarding processes of co-production will be implemented. With regard to data infrastructure, all nations have created frameworks and strategies to support the flows of information between health and social care. However, in practice, the fragmented nature of data held within different parts of health and social care sectors and the functionality of systems created to support integration (e.g. WCCIS in Wales, Epic and Encompass in Northern Ireland) have been identified as challenges. More broadly, a recent report published by Nuffield Trust (Hutchings and Morris, 2022) on digital healthcare across the four nations notes the barriers presented by limited comparable data, challenges exacerbated by differing characteristics of populations, and variations in integration between care and health provision. In addition, at a fundamental level, measuring success is complicated in any nation by the different conceptualisations of stakeholders, depending on their positioning in the care ecosystem. The common terminology of digital 'transformation' can fail to take into account the varying (and potentially contradictory) perspectives on what is, or should be, transformed.

ENDNOTES

[1] Sustainable Care: connecting people and systems programme, ESRC Grant reference: ES/P009255/1, 2017-21, Principal Investigator Sue Yeandle, University of Sheffield.

[2] In 2019 Scottish Care published their own Human Rights Charter for Technology and Digital in Social Care (2019b), emphasising co-design, respect, common good, autonomy, and consent.

[3] The priorities outlined in the 2015 Digital Health and Social Care Strategy were: efficient access to integrated information, supporting professionals to use digital tools, improve quality and drive innovation through collaboration between services, and use joint planning across stakeholder groups.

[4] An example of a programme focused on enhanced data infrastructure combining of health and social care data into 'research ready' formats is the 'Data Loch', a collaboration between South East Scotland region's Local Authorities, NHS health boards and The University of Edinburgh and funded by Data-Driven Innovation (DDI) initiative (2019-2024) as part of the City Region Deal

[5] SAIL was initially a pilot project in Swansea, then became the national Trusted Research Environment (a controlled digital environment where sensitive data is stored and where it can be analysed by researchers). It links the 'primary' dataset on health to links education and social care.

[6] The system itself is provided by Careworks, which was acquired by Advanced Computer Software (known as Advanced) in 2019. Advanced is an equity funded private company which is fast growing – since 2012, it has made 23 acquisitions.

REFERENCES

ALLIANCE. (2021) Response to the publication of the refreshed Digital Health and Care Strategy for Scotland.

ALLIANCE. (2022a) Data Strategy for Health and Social Care: analysis of consultation responses.

ALLIANCE. (2022b) Voice application user design workshops.

Atkins G., Dalton G., Phillips, A., and Stojanovic, A. (2021) Devolved public services The NHS, schools and social care in the four nations. Institute for Government.

Audit Wales. (2020) Welsh Community Care Information System: Report of the Auditor General for Wales.

BT. (2017) Digital Resilience, Digital Partnership A Baseline of digital inclusion in Northern Ireland.

Care & Repair Cymru. (2022) Written evidence submitted by Care & Repair Cymru: September 2022.

Carmel, E., & Papadopoulos, T. (2003). The new governance of social security in Britain. Understanding social security: issues for social policy and practice, 31-52.

Carmel, E., Hamblin, K., & Papadopoulos, T. (2007). Governing the activation of older workers in the European Union: The construction of the "activated retiree". *International Journal of Sociology and Social Policy*, 27(9/10): 387-400.

CDPS. (2022) Consultation response to PAC scrutiny of DHCW: From The Centre For Digital Public Services.

Clay, A., and Usher, K. (2021) Outcomes from Data Dialogues. NESTA.

Davies, A.R., Sharp, C., Homolova, L. and Bellis, M. (2019) Population Health in a Digital Age. The use of digital technology to support and monitor health in Wales.

DC&DO. (2022). Transforming for a digital future: 2022 to 2025 roadmap for digital and data.

Department of Health. (2016) Health and Wellbeing: 2026 Delivering Together

Department of Health. (2018) Co-production Guide: Connecting and Realising Value Through People.

Digital Health & Care Scotland. (n.d.a) Digital Maturity.

Digital Health & Care Scotland, (n.d.b) Workforce – Digital Skills and Leadership

Digital Health & Care Scotland, TEC. (2020) Digital Citizen Delivery Plan.

Digital Health and Care Scotland, TEC, & COSLA. (2020) Connecting People Connecting Services Digital Approaches in Care Homes Action Plan.

Digital Health and Care Wales. (2022) Annual Report: 2021-2022.

Digital Health and Care Wales and TPXimpact. (2022) Digital transformation at Digital Health and Care Wales.

Digital Inclusion Alliance Wales. (2021) From Inclusion to Resilience An agenda for digital inclusion.

Digital Inclusion Alliance Wales. (2022) Response from: Digital Inclusion Alliance Wales.

Digital Office. (n.d.) We Are The Digital Office For Scottish Local Government.

Donald, P. 2022. We need a digital inclusion plan that will build on the excellent work that organisations such as Advice NI, Disability Action. VIEW Digital.

Downey, A. (2021) Digital Health and Care Wales officially launches as special health authority.

Erikainen, S., Boydell, N., Sethi, N. and Stewart, E. (2021) Participatory Public Engagement in Digital Health and Care.

Gething, V. (2020) Written Statement: Digital Health and Care Wales.

Health and Social Care Board. (n.d.) Digital Health and Care Northern Ireland.

Health and Sport Committee. (2018) Technology and innovation in health and social care. Scottish Parliamentary Corporate Body.

Health Tech Newspaper. (2022) Digital Health and Care Wales commits to digital inclusion.

Hearn, E. (2022) Powys looks to replace problematic social care computer system. Shropshire Star.

Hoeksma, J. (2020). Northern Ireland signs with Epic for £275m EPR programme. Digital Health.

Honeyman, M., Maguire, D., Evans, H. and Davies, A. (2020) Digital technology and health inequalities: a scoping review. Cardiff: Public Health Wales NHS Trust.

Horton, C. (2022) Lyniate looks to create single digital health record for every person in Northern Ireland. Think.Digital Partners.

HSC. (2022a) Digital Strategy Health and Social Care Northern Ireland 2022-2030.

HSC. (2022b) Cyber Security Strategy HSC Northern Ireland 2022-2026.

HSC. (2022c) Digital Innovation Strategy HSC Northern Ireland 2022-2026.

HSC. (2022d) Data Strategy HSC Northern Ireland 2022-2030.

Hutchings, R., Morris, J. (2022) Digital health care across the UK: where are we now? Nuffield Trust.

Lydon, C. (2022) Northern Ireland gains support for digital health record programme.

Lydon, C. (2022) Lyniate announces merger agreement with CareCom. Digital Health.

McHugh, N. (2021) An overview of the Digital Divide in Northern Ireland. Research Matters.

Med-Tech News. (2022) Search begins for digital health solutions to tackle challenges in Wales.

Morgan, E. (2022) Written Statement: Transforming health and social care using digital and data services. Cabinet Statement.

Naughton, J. (2014) The NHS's chaotic IT systems show no sign of recovery. The Guardian.

Neath Port Talbot Council. (2021) The commitment to a preferred I.T. system to support social services functions.

Nesta. (2021) Data Dialogues Summary Report.

New York Times. (2022) 'They Were Entitled to Free Care. Hospitals Hounded Them to Pay'.

NHS Education for Scotland. (n.d.) https://www.nes.scot.nhs.uk/our-work/digital-health-and-care/

NHS Wales. (n.d.a) Digital Services for Patients and Public (DSPP),

NHS Wales. (n.d.b) Digital Community Care Record.

NHS 24. (2019) Annual Operating Plan 2019/20.

NSS. (2021) NSS Remobilisation Plan.

NICON and HIRANI. (2022) Health and Wealth in Northern Ireland: Capitalising on the Opportunities.

Nuffield Trust. (2021) Integrating health and social care.

Office of National Statistics [ONS] (2022). Health state life expectancies, UK: 2018 to 2020.

REFERENCES

Orton, C. (2022) **SAIL Databank & National Core Studies: Accelerating the availability and accessibility of UK health data.**

Pringle, E. (2022) **Care Technologists pilot expands.** Health and Care Scot.

Public Health Scotland. (2021) **Public Health Scotland's Digital Strategy April 2021.**

Reed, S., Oung, C., Davies, J., Dayan, M. and Scobie, S. (2021) **Integrating health and social care.** London: Nuffield Trust.

Rohde, Z. (2022) **Scotland's refreshed Digital Health & Care Strategy.**

Say. M. (2022a) **Northern Ireland digital chief for health and care highlights key projects.** UK Authority.

Say, M. (2022b). **Northern Ireland gets new digital strategy for health and social care.** UK Authority.

SCDI. (2021) **Mind the gap.**

Scottish Government. (n.d.) **Connecting Scotland – supporting everyone in Scotland to get online.**

Scottish Care. (2019a) **Techrights: Human Rights, Technology and Social Care.**

Scottish Care. (2019b) **A Human Rights Charter for Technology and Digital in Social Care.**

Scottish Funding Council. (2019c) **New £10m investment for digital health**.

Scottish Government. (2019d) **The Scottish Approach to Service Design** (SAtSD).

Scottish Government. (2020) **Near Me Video Consulting Programme.**

Scottish Government. (2021a) **Data and Intelligence Network: ethics framework.**

Scottish Government. (2021b) **Connecting Scotland: A Year In View.**

Scottish Government. (2021c) **Digital Scotland Service Standard.**

Scottish Government. (2021d) **Adult social care: independent review.**

Scottish Government. (2021e) **A National Care Service for Scotland: consultation**.

Scottish Government. (2021f) **Digital Health and Care Strategy**

Scottish Government. (2021g) **A changing nation: how Scotland will thrive in a digital world**

Scottish Government. (2022a) **Community equipment and housing adaptations: draft guidance**

Scottish Government. (2022b). **Health and social care - data strategy: consultation analysis.**

Scottish Government and COSLA. (2021). Enabling, Connecting and Empowering: Care in the Digital Age-Scotland's Digital Health and Care Strategy, Edinburgh: Scottish Government. Available at: **https://www.gov.scot/ publications/scotlands-digital-health-care-strategy/ documents/** [accessed 01.12.22].

Scottish Government and COSLA. (2022) **Care in the Digital Age: Delivery Plan 2022-23.**

Scottish Government. (n.d.) TEC **https://tec.scot/**

Scottish Local Government Digital Office (Digital Telecare). (2021) **Scotland-Wales collaboration set to improve independent living.**

Scottish Local Government Digital Office (Digital Telecare). (2020) **Digital Telecare in Scotland.**

Scottish Parliament. (2018) **Technology and innovation in health and social care.**Scottish Parliament. (2022) **National Care Service (Scotland) Bill.**

Social Care Wales. (2019) **Social care research and development strategy for Wales 2018-2023**.

Social Care Wales. (2021) **A strategic approach to social care data in Wales: Statement of Strategic Intent.**

Social Care Wales. (2022a) **Delivering a strategic approach to social care data in Wales.**

Social Care Wales. (2022b) **Response from: Gofal Cymdeithasol Cymru** | Social Care Wales.

Social Care Wales. (2022c) **New online training launched to give care workers more confidence in working with digital technology.**

Social Care Wales. (2022d) **Update on our approach to social care data.**

South of Scotland Enterprise. (2022) **New South of Scotland start up launched to help care sector develop skills via virtual reality.**

Spirit Health. (n.d.) **Remote Patient Monitoring.**

Stockman, S. (2020) **Digital Northern Ireland: 2020.** Invest NI.

Taylor, D. and Thomas, M. (2021). **Growing pains: integrated care lessons from Scotland and Wales**, The Good Governance Institute.

TEC Cymru. (n.d.) **TEC Cymru Evaluation Reports.**

TEC Scotland. (n.d.) **Midlothian Pathfinder.**

Tegria. (2022). **Health and Social Care Northern Ireland secures specialist support for largest ever digital transformation programme.**

Trendall, S. (20220 **'We want to set the digital agenda with and for Wales.'** Public Technology.

University of South Wales. (2022) **Leading digital transformation in health and social care with new USW degree.**

Wales Co-operative Centre. (2018) **Digital Inclusion in Health and Care in Wales.**

Welsh Government. (2015) **Informed Health and Care: A Digital Health and Social Care Strategy for Wales.**

Welsh Government. (2021a) **Digital strategy for Wales.**

Welsh Government. (2021b) **A Healthier Wales: our Plan for Health and Social Care.**

Welsh Government. (2022) **Broadband schemes receive £9 million funding boost.**

Welsh Government and Wales Co-operative Centre. (2019) **Digital Inclusion Guide for Health and Care in Wales.**

Wherton, J., Greenhalgh, T. and Shaw, S.E. (2021) Expanding video consultation services at pace and scale in Scotland during the COVID-19 pandemic: national mixed methods case study. *Journal of Medical Internet Research*, 23(10): p.e31374.

Wright, J. (2020) **Technology in Social Care: A Review of the UK Policy Landscape**. University of Sheffield: Sheffield, UK.

Wright, J. (2021). The alexafication of adult social care: virtual assistants and the changing role of local government in England. International Journal of Environmental Research and Public Health, 18(2): p.812.

KEY FINDINGS

Our previous Working Paper (Whitfield and Hamblin, 2022) explored the development and use of technologies in England's social care sector; this companion piece turns to the approaches of governments in Scotland, Wales and Northern Ireland. It outlines the variety of public organisations involved in funding and implementing technology, then highlights three key aims in governance across the three nations (prioritised to varying extents):

1. promoting inclusion and tackling inequalities and inequities that might lead to digital exclusion;
2. implementing co-design and co-production;
3. developing data infrastructure projects and data frameworks.

Photo: Peter Kindersley

ABOUT THE RESEARCH

The Centre for Care is a collaboration between the universities of Sheffield, Birmingham, Kent and Oxford, the London School of Hygiene & Tropical Medicine, the Office for National Statistics, Carers UK, the National Children's Bureau and the Social Care Institute for Excellence. Working with care sector partners and leading international teams, it addresses the urgent need for new, accessible evidence on care. Led by Centre Director Sue Yeandle and Deputy Director Matt Bennett, its research aims to make a positive difference in how care is experienced and provided in the UK and internationally.

This working paper was written by Grace Whitfield and Kate Hamblin as part of the Centre's work on Digital Care: roles, risks, realities and rewards. The paper was designed and typeset by Dan Williamson.

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