# Digital exclusion

The COVID-19 pandemic has had the effect of a rapid acceleration of digitalisation across the NHS and surrounding system. The Digital Engagement Score, representing people's levels of online activity, increased by 11% in 2021 compared to 2020 (UK Consumer Digital Index 2021, Lloyds Bank). More than half (55%) of the online population increased their internet usage with people spending on average 13 hours more per week online. Whereas remote delivery supports social distancing, infection control, improved service efficiency and increased healthcare access for some, it also has the unintended effect of increasing marginalisation of already vulnerable groups.

## What is digital exclusion?

The digital divide is the gap between those who have access to the latest technology and those who do not. It is another facet of the deep inequalities which run through the UK and is more widespread than many people are aware. It gives rise to inequalities in access to opportunities, knowledge, services and goods (Cambridge Centre for Housing and Planning Research (CCHPR) at University of Cambridge, October 2020). We need to ensure that we do not leave the digitally excluded behind as we become a highly digitalised society.

The Health and Social Act 2012 contains specific legal duties on health inequalities which require NHS England and CCGs to 1) reduce inequalities between patients with respect to their ability to access health services and 2) reduce inequalities between patients with respect to the outcomes achieved for them by the provision of health services.

Official measures of digital exclusion in the UK include anyone who has never used the internet or has not used it within the last three months. The Department of Education produced guidance which states that there are six categories of Essential Digital Skills for life and work people need, to be classed as digitally included:

1. Foundation skills such as turning on devices and understanding the concept of using the internet.
2. Communication skills – being able to communicate online i.e. email, instant messaging, sharing information online
3. Handling information and content- using a search engine to look for information, finding a website, understanding not all information online is reliable
4. Transacting- buying items or services from a website or buying and installing apps on a device.
5. Problem solving- verifying source of information online, solving a problem with a device or digital service using online help
6. Skills to stay safe and behave legally online

Even before the pandemic, digital exclusion was a problem. In 2021, 5% of the UK population was estimated to be offline with a further 29% having Very Low Digital Engagement. The percentage of people offline in the Southwest is higher than the national

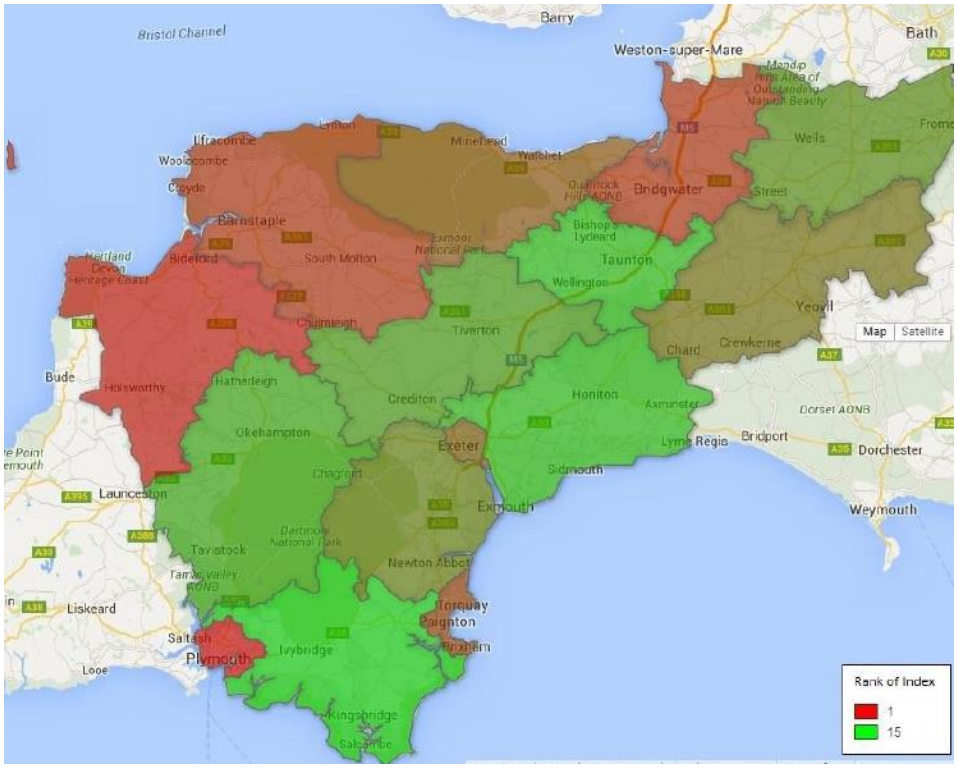
average at 8%. The UK consumer digital index 2020, an annual survey of roughly 4000 customers by Lloyds Bank, found that 16% of participants could not carry out a full set of seven basic digital tasks and 9% were unable to carry out any of the seven tasks. Even though there is a pattern of declining numbers of people lacking digital skills over time it is still estimated that 7.9 million people will lack digital skills in 2025. Of the 8 million people in UK who don't use the internet, 90% suffer from socioeconomic disadvantages. They are more likely to be in the lowest income bracket and/or be disabled with long standing health conditions. The likelihood of having internet at home increases along with income with only 51% of households earning between £6-10K having internet access compared to 99% of those with income over £40K.

## What contributes to digital exclusion?

Access to the internet is only one component of digital exclusion. This tends to be shaped by having sufficient income to access the internet and buy the necessary equipment, by geography as network coverage and speed of internet can vary according to where you live (tends to be a rural/urban divide), and by IT literacy. Other factors contributing to digital exclusion include lack of interest or perceived need, confidence, and privacy and security concerns. Amongst many already excluded groups, the perception they do not need to engage digitally is a significant barrier – 61% of households without internet access say they do not need it. This highlights that digital exclusion is defined by cultural and behavioural factors as well.

Digital exclusion is likely to remain a problem in the future for number of reasons. Many of those currently not online will continue to be offline, many of whom will live another 20 to 30 years. A survey by Lloyds Bank in 2020 found that almost half (48%) of those digitally excluded said 'nothing' could motivate them to get online. There will always be a residual core that will always struggle to get online regardless of age. Digital technology is continually developing and has the potential to leave people behind. Retirement is often a key timepoint when exposure to or usage of technology changes or reduces.

A report by ERS for the Heart of the Southwest Local Enterprise Partnership in 2015 mapped priority areas for work on digital inclusion using various metrics including Multiple Indices of Deprivation, risk of poverty, number of NEETs, number of people aged 65 and over, high speed broadband availability and benefit claimants. They produced a heat map at district level which is shown below. The majority of priority areas were in the Devon ICS footprint, with Plymouth, Torridge, North Devon, Torbay and Exeter featuring in the top 7 areas.




Services closures during the pandemic also increased the risk of digital exclusion. Public libraries which give some the opportunity of getting online without increased financial burden were closed during lockdown. Even though they offered the same resources online this was of no use to those digitally excluded who depended on the library facilities. For those people it would have become impossible to check emails, order groceries, apply for jobs or even access essential health and benefits information.

## Who is at risk of digital exclusion?

There are no national datasets which track the direct relationship between digital exclusion, access to digital healthcare, health outcomes and health inequalities. However, there is evidence of correlations between digital exclusion and poverty, disability, unemployment and low educational attainment (Ofcom, 2020).

Digital exclusion is not just related to the elderly. Certain groups are more likely to be digitally excluded than others. "Digital Exclusion', a research report by the Low Incomes Tax Reform Groups of The Chartered Institute of Taxation 2012, reported that the main determinant of digital exclusion is age but other significant factors – often combined with low income- include disability, learning difficulties, ethnic origin, location, culture and language.

Financially disadvantaged people

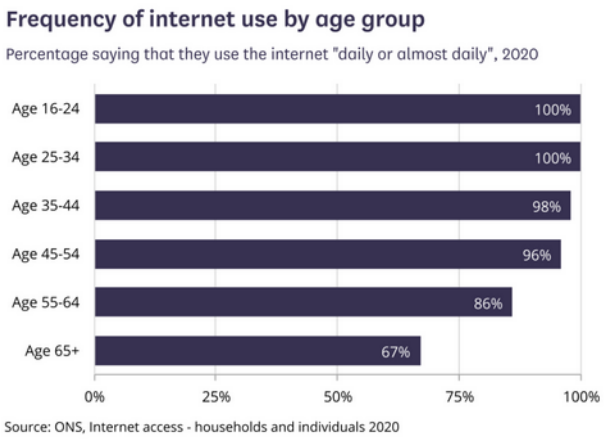
Among working aged adults, those in the lowest socio-economic groups are more than three times as likely as those in the highest socio-economic groups to not use the internet or to be 'limited users' who use the internet for only a few tasks (Ofcom 2020). It is important to realise that many studies used to indicate levels of inclusion are based on access data on how many homes have broadband. However, as the use of internet connected devices, notably smartphones, increases using home broadband as a measure of digital inclusion will become biased towards lower income households. This is because mobile-only households are concentrated among those with lower incomes.

Even where a person has access to IT equipment at home, along with necessary skills to use it, financial concerns can be prohibitive. The most financially vulnerable are particularly excluded: 29% live in households without internet access, 12 % have fixed line telephones only, and 2% don't use any form of telephony, preventing access to text messaging, video or even telephone consultations (ONS, 2019, Ofcom, 2018). For people who access the internet only through a smartphone, the costs of mobile data can also be prohibitive. Ofcom's 2020 Technology tracker figures showed that around a million children were accessing online learning through a mobile phone. This led many disadvantaged families struggling to access online education due to expensive mobile phone tariffs while those families who were better off had comprehensive broadband deals.

Social factors more common in lower socio-economic groups including insecure housing and domestic abuse also undermine remote delivery of healthcare. Unsuitable overcrowded accommodation can mean lack of private space for consultation. Many rough sleepers do not access the internet or go online to access health support, and only 1 in 5 surveyed people suffering domestic abuse said their online activity was not monitored by their partners.

Age

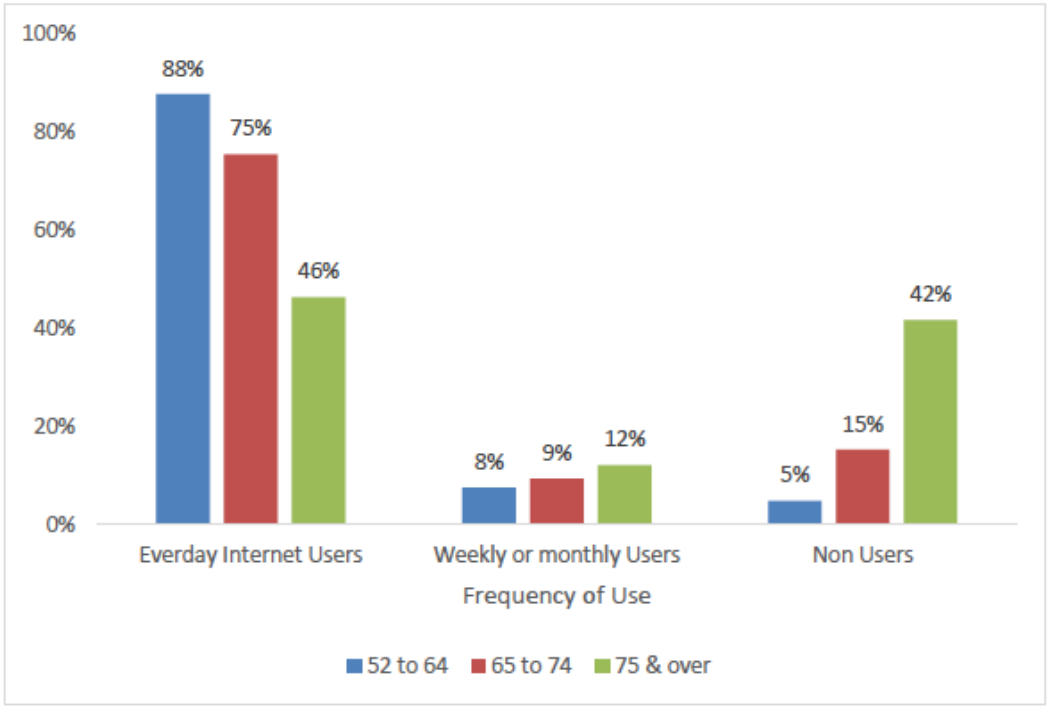
The Office of National Statistics (ONS) released a survey in 2020 showing that the likelihood of an individual regularly using the internet decreases with age.



The UK has an ageing population and will require an older workforce due to the extension of working lives and the need for people to stay economically active for longer. With many older people digitally unengaged, the skill set needed is not present. Those who are not online are not just older. They are also more likely to be in worse health, poorer and less well educated than their peers.

A research report by the Low Incomes Tax Reform Groups of The Chartered Institute of Taxation in 2012 showed that after the age of 65 the number of people keeping themselves informed of communications technology dropped dramatically by 20%. 56% of people over 65 'voluntarily' excluded themselves from having internet access compared to the national average of 22%. Positively, there has been an increase of people aged 50 to 70 years old online. In 2011, just over half of people aged 65-74 had recently used the internet with this figure jumping to 8 in 10 by 2019 (Centre for Ageing Better).

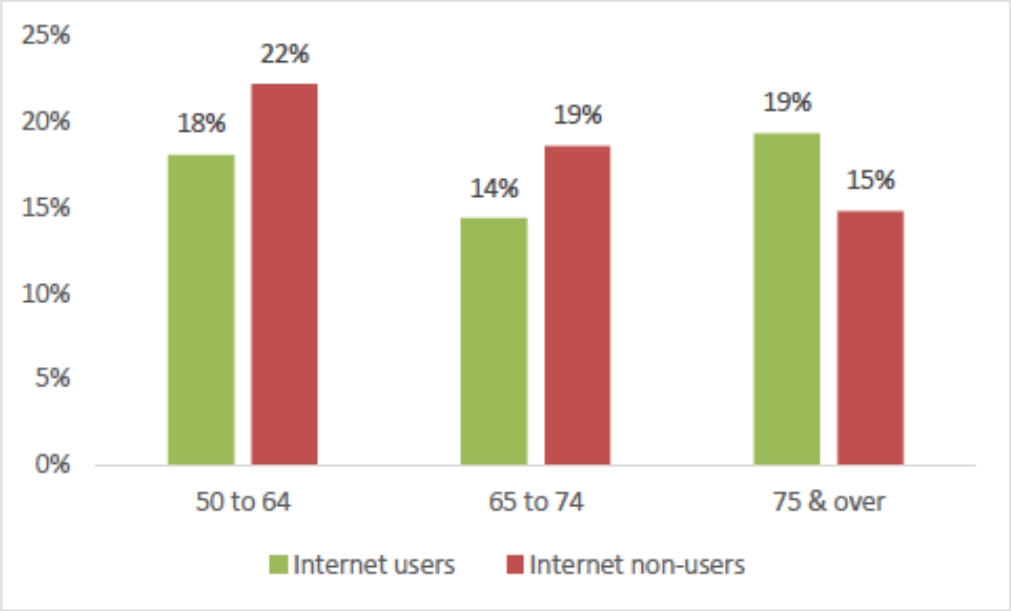
A recent report by Age UK analysed data from the English Longitudinal Study of Ageing (ELSA) COVID-19 sub study. Internet use was shown to be much lower among those aged 75+.




Source: Age UK analysis of ELSA Covid-19 Substudy Wave 1, 2020.

Whereas 75+ group make up the highest proportion of non-users, only 15% of these say they would like to use the internet more.

Proportion of users and non-users who would like to use internet more

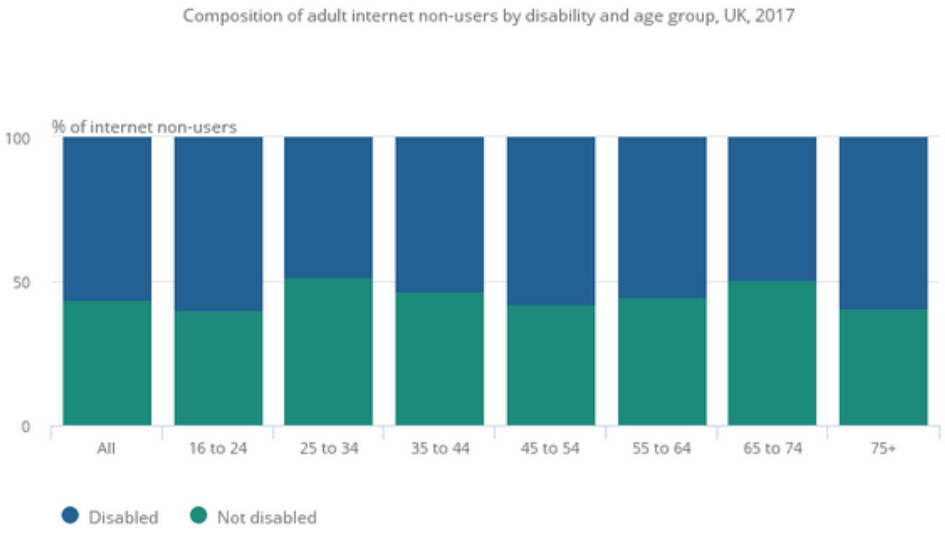



Source: Age UK analysis of ELSA Covid-19 Substudy Wave 1, 2020.

Physical and Learning Disabilities

People with impairments, disabilities or long-term conditions are much more likely to be digitally excluded (Lloyds, 2020). The ONS also reported that those with a disability were also less likely to use the internet with only 84% of adults with disability reporting they use the internet daily or almost daily compared to 91% who were not disabled.

Figures from the ONS in 2017 showed that a large proportion of adult internet non-users were disabled. Disability is a key reason why younger people don't access the internet, with 60% of the digitally excluded between the ages of 16 to 24 classing themselves as disabled.




**Source: Office for National Statistics - Internet Users, Labour Force Survey (LFS)**

Research from Lloyds Bank in 2020 also asked those with a disability which technologies they used to help them digitally. In those with high or very high levels of digital engagement 56% used biometric recognition tools such as face identification or fingerprint recognition, 51% used voice assistants, 19% used technology to help with mobile impairments and 9% used screen readers. The figures for those with low or no digital engagement were much lower which may suggest that there are opportunities for people with disabilities to improve digital engagement through tools such as screen readers or dexterity supports (UK Consumer Digital Index 2020 report, Lloyds Bank, 2020). However, it is important to realise that there are financial implications of extra accommodations. People with disabilities are more likely to be financially disadvantaged and the costs of any adaptations or tools may be prohibitive.

People with learning disabilities reported some benefits of the increased use of digital platforms including keeping in touch with family and friends, making new friends through online groups and activities, enjoying the shared experiences and developing skills in using new technology. However, there are still challenges around the use of digital platforms. While many people have become competent in using a particular online platform, difficulties arise when organisations use different digital platforms. There is an increasing gap between people who are connected online and those who are not, with those who cannot access online technology reporting feeling even more excluded than before the pandemic (Centre for Educational Development, Appraisal and Research (CEDAR), University of Warwick).

Research by Royal National Institute of the Blind in 2018 reported that sensory impaired users' digital device ownership is generally low and online activities limited compared the general population. Most sensory impaired individuals are unemployed and find current

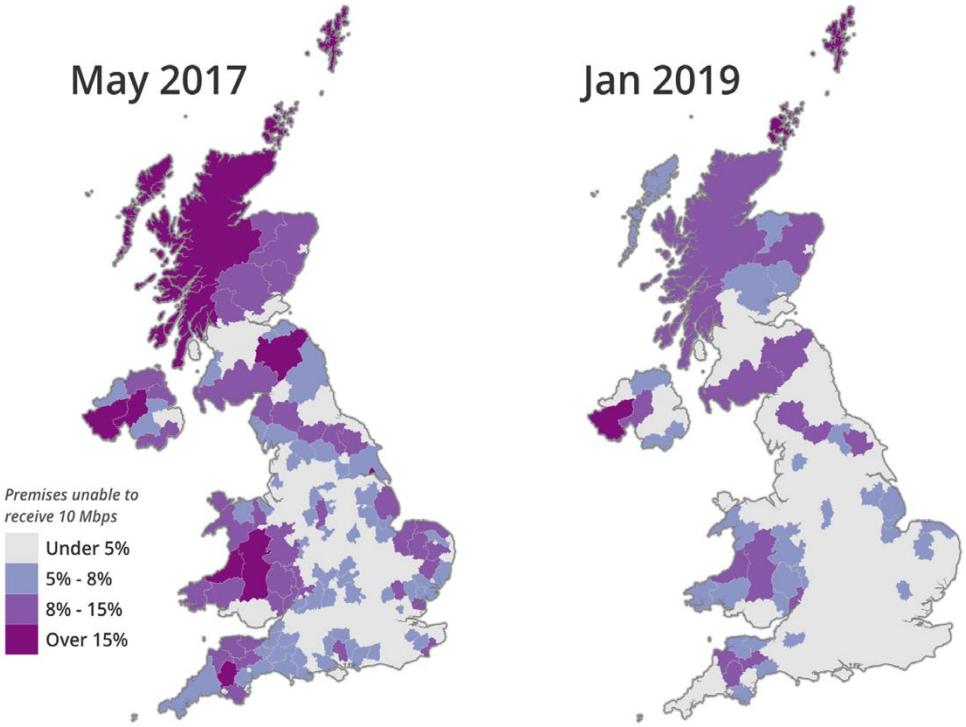
assertive technology too expensive. Communication difficulties exist for deaf people with heavy reliance on visual cues for effective communication. A report in September 2020 found that nearly 60% of respondents admitted they had 'put off' seeking medical advice from their GP since the introduction of remote appointments leaving them at risk of not receiving medical care and 43% felt that their communication needs were not met during the appointment.

Rural populations

Poor quality and unreliable broadband remains a barrier within rural populations, even when other conditions are in place to support digital inclusion. Currently a fifth of households in rural areas cannot get superfast broadband and many are still getting internet speeds as slow as 0.12Mbps. Network providers have historically focused on developing infrastructure in densely populated areas where there are the most customers and therefore the greatest financial gain. Lack of access to fast, reliable broadband and mobile coverage can lead to increased social and economic disadvantage

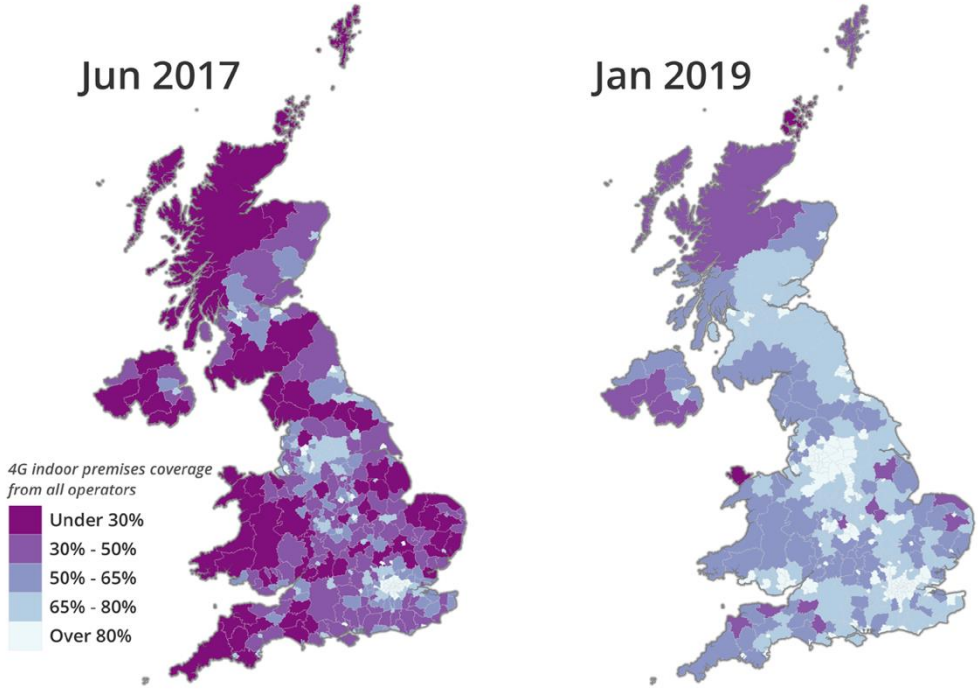
A report from the Environment, Food and Rural Affairs Committee in September 2019 highlighted the continuing digital divide between urban and rural areas. This can leave behind rural communities who struggle to access online services that most of the country takes for granted. Although there have been significant improvements in broadband and mobile coverage since 2015, this was noted to have barely kept up with increasing demand. Many rural communities and businesses especially those in the hardest to reach areas, continue to struggle in terms of poor or no access to broadband and poor coverage of mobile phone services. People in rural areas struggle to access 4G or even 3G data services. The increasing digitalisation seen over recent years, and in particular during the pandemic, has widened the digital divide between rural and urban areas and therefore increased marginalisation of rural communities.

## Availability of 10 Mbps broadband has improved, but some rural areas still lack coverage




Data: Ofcom Connected Nations (Spring 2019 update). Map: House of Commons Library

## 4G mobile coverage in rural areas has improved since 2017 but remains 40% below urban coverage



Minority Ethnic groups

Research has shown that nearly half of all BAME households in the UK live in poverty and that people from a Pakistani and Bangladeshi household are nearly three times as likely as their White British counterparts to live in low-income households. People from BAME communities are therefore at higher risk of digital poverty and exclusion. Analysis of GP Patient Survey data also suggests lower awareness and use of online GP services among people from some Black, Asian and minority ethnic communities. A report by the Ada Lovelace Foundation in combination with The Health Foundation showed only a minor disparity in views and attitudes towards technology between Black, Asian and minority ethnic and White communities but this was not significant. It is therefore more likely that wider socio-economic factors have a bigger impact on these populations in terms of digital exclusion rather than ethnicity alone.

Marginalised groups

Marginalised populations such as migrants living in vulnerable circumstances, Gypsy, Roma and Traveller communities, and people experiencing homelessness, are particularly at risk of adverse outcomes due to digital exclusion.

Digital exclusion is high amongst homeless communities. Some people have good digital skills but lack a device, cannot afford data, or access public Wi-Fi. Some have low digital skills and low literacy or do not trust technology.

Asylum and refugee populations have particular barriers to digital inclusion which can impact on their health and social care needs. They may encounter difficulty opening a patient account to access GP online services as these usually require an address, photographic ID and in-person verification of ID for registration. Low or limited English skills can cause difficulty accessing translated online services. For people with low English language skills, being able to access the internet independently can facilitate their inclusion while they improve their language skills (Good Things Foundation, 2020). Learning digital skills from scratch is hard especially if also learning a new language. There may be a lack of confidence in ability to learn new skills as well as embarrassment at not knowing how to use the internet or speak English. The need for online connectivity is particularly acute for asylum seekers, many of whom are vulnerable, isolated and have family and friends trapped in dangerous situations elsewhere in the world. Many asylum seekers find themselves digitally excluded due to their inability to access affordable and reliable internet access. Refugee Action February 2021 bulletin reported data from 43 organisations working across the UK. Digital access was the second top needs with 53% of clients reporting lack of or insufficient access to devices and internet access and need for digital skills development. Barriers to support for this group were inability to access digital services (79%) and language and communication difficulties exacerbated by remote delivery (76%).

# Impacts of digital exclusion during pandemic

Two things happened during the pandemic which have increased inequalities around digital exclusion: rapid pace of digitalisation and increased financial hardship and poverty. Increased working, learning, and interacting online during the pandemic has widened the gap for those who lack digital skills or access. The internet and digital devices have played an important role in how people have accessed services, education, medical appointments, and stayed in touch with friends and family. In some cases, services, activities and information have moved exclusively online within offline alternatives limited. For children, internet and device access became essential for home schooling and many people were advised to work from home.

## Economic impacts

Digital exclusion creates problems for those already experiencing poverty. Putting together a CV, applying for jobs, managing, and keeping track of money, and applying for universal credit all benefit from digital inclusion. The Centre for Economics and Business Research have identified five areas in which individuals who acquire basic digital skills are able to benefit and from which people on the wrong side of the digital divide are excluded:

1. Earning benefits: increased earning potential of 3-10% through acquisition of digital skills.
2. Employability benefits: improved chances of finding work for someone who is unemployed and an increased likelihood that someone who is inactive will look for work.
3. Retail transaction benefits: shopping online has been found to be 13% cheaper on average than in store.
4. Communication benefits: basic digital skills can enable people to connect and communicate with friends, family and the community 14% more frequently.
5. Time savings: time saved by accessing government services and banking online rather than in person of about 30minutes per transaction.

In 2016, it was estimated that within the next 10-20 years, 90% of jobs will require some digital skills, and in Lloyds Bank research, half of those online indicated that the internet had helped find them a job. The digitally excluded will be increasingly at a disadvantage in the employment market. Many people over age of 50 still rely on word of mouth and adverts to look for work. Less digitally confident people will struggle to search for and apply for jobs online. Those who rely on computers at libraries or community centres for online access that have closed during lockdown will have struggled to access online jobs. With social distancing, many interviews will have moved online, leaving those digitally excluded at a disadvantage. While many older adults are confident in using digital devices for social purposes, many are less confident in using them for work-based tasks, giving them a disadvantage in the job market.

With lockdown many elements of employment support moved online or to video calls. Some older adults without access to a computer or unable to confidently use one were unable to take up remote support. Most jobcentres continued to help those unable to get online but only provided basic support, had shorter calls, and could not help with job searches or applications. With conditionality attached to claiming universal credit proof of job search will be required for claimants. In 2021, benefit claimants are more likely to have less digital engagement compared to the rest of the population with over one-third of UK benefit claimants having very low digital engagement. Although the proportion of benefit claimants with very low digital engagement in the Southwest has reduced from 40% in 2020, it remains high at 34% in 2021. Those without online access or digital skills will have received the least support to search and apply for jobs but will be at the highest risk of losing their benefits.

There is also a digital 'poverty premium' which is the extra cost borne by those financially less well-off due to not having access to the best deals.

People who are affected by digital inequalities may also have been impacted by their inability to work from home during the pandemic. This could be for a variety of reasons including lack of device, internet access and space. This not only excludes these people from jobs which will now be done completely from home but also put them at increased risk of catching the virus as they had to travel to work.

## Education

The impact of digital exclusion on education is covered in section ……..

## Healthcare

Data from the UK digital lives in 2021 survey from Lloyds showed that 37% of people use the internet for their physical health, with 25% using for their mental health. Digital exclusion may make it more difficult for adults to access support services, medical appointments and welfare activities. Digitally excluded people may not be able to use contact tracing apps and may experience negative health impacts. The people who most need health and care services are those who are most likely to be digitally excluded, and there is a risk that digital transformation widens health inequalities rather than narrowing them.

The internet is increasingly becoming the way services are accessed and publicised. Booking appointments, having virtual consultations, and ordering prescriptions are already common. Resources such as patient information and self-care advice are increasingly online. Patients are directed to register at GP practices online and self-referral to services requires digital access and confidence with use. All of the above became the norm during the COVID pandemic with alternatives shut down to minimise the risk of exposure.

Concerningly, false information about COVID-19 can lead people to ignore official guidance, avoid getting vaccinated or even use harmful 'miracle' cures. Research by Alan Turing Institute showed that individuals with lower digital literacy, numerical literacy, health

literacy and cognitive skills were worse at assessing the truthfulness of health -related statements.

## COVID- 19 apps

A mobile phone app was launched during the pandemic as part of the test, trace and isolate programmes to prevent spread of the virus. Those that were digitally excluded may have been unable to use app due a number of factors such as lacking the digital skills to operate it or may not have had a smartphone to support the app or may not own a smartphone at all. There were concerns that those who were digitally excluded from the app may experience negative health impacts as those who are more likely to be digitally excluded may be more susceptible to serious illness from COVID-19. A 2020 Ofcom study of over 3600 people found that older people and those from lower income households were less likely to own a smartphone which is needed to use contact tracing apps. A survey in October 2020 of 650 people over 65 years by Silver Voices, a charity for older people, found that 31% had reported downloading the app but of those who had not downloaded it nearly 6 in 7 said it was because their phone was too old to support it.

## Mental wellbeing/social isolation

Internet access was important for managing mental wellbeing during lockdown, not just for communicating with family and friends, but also for fitness and social activities with many classes and activities shifting to online delivery. Digital exclusion is a key driver of social isolation. Loneliness increased in those people who were digitally excluded and did not have access to support networks during the COVID-19. For those shielding or having to self-isolate, lack of digital access found people shut in their homes with no means of communicating with the outside world.