



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



ELSEVIER

Disponible en ligne sur www.sciencedirect.com

ScienceDirect

et également disponible sur www.em-consulte.com



Short communication

Out on the streets – Crisis, opportunity and disabled people in the era of Covid-19: Reflections from the UK



Dans la rue – Crise, opportunité et les personnes handicapées au temps de Covid-19 : réflexions du Royaume-Uni

Ieva Eskytė*, Anna Lawson, Maria Orchard, Elizabeth Andrews

Centre for Disability Studies, School of Law, University of Leeds, LS2 9JP, Leeds, United Kingdom

ARTICLE INFO

Article history:

Received 2 July 2020

Accepted 14 July 2020

Available online 18 August 2020

Keywords:

Coronavirus

Disability

Pedestrians

Accessibility

Physical distancing

Public space

Streets

Ableism

ABSTRACT

Governments have responded to the Covid-19 crisis through various measures designed to reduce transmission and protect people judged to be at heightened risk. This paper explores the implications of such measures in the UK for disabled people, with a particular focus on measures designed to reduce and reshape the use of streets and public space. We divide UK measures into two broad categories. First, there are measures designed to reduce the use of streets and public spaces – e.g., rules requiring people to stay at home except in tightly prescribed circumstances and measures providing specific support (including food delivery and priority online shopping) for people designated as clinically extremely ‘vulnerable’. Second, there are measures designed to control the behaviour of people using streets and public space – e.g., rules on

* Corresponding author.

E-mail addresses: i.eskyte@leeds.ac.uk (I. Eskytė), a.m.lawson@leeds.ac.uk (A. Lawson), m.orchard@leeds.ac.uk (M. Orchard), e.c.andrews@leeds.ac.uk (E. Andrews).

t physical distancing and the use of face coverings. We explore the disability-related concerns associated with these types of measure. We also highlight the opportunities this crisis presents for embedding accessibility and inclusion more firmly into the fabric of our streets and call for renewed resistance to policies and practices shaped by ableist assumptions and attitudes.

© 2020 The Authors. Published by Elsevier Masson SAS on behalf of Association ALTER. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

R É S U M É

Mots clés :

Coronavirus
Handicap
Piétons
Accessibilité
Distance physique
Espace public
Rues
Capacitisme

Les gouvernements réagissent à la crise de Covid-19 en prenant diverses mesures pour réduire sa transmission et pour protéger les personnes jugées à haut risque. Cet article explore les implications de ces mesures au Royaume-Uni pour les personnes handicapées, en se concentrant sur celles conçues pour réduire et remodeler l'utilisation des rues et des espaces publics. Nous divisons les mesures en deux catégories. Premièrement, il existe des mesures conçues pour réduire l'utilisation des rues et espaces publics – par exemple, les règles obligeant les personnes à rester chez eux, sauf dans les circonstances strictement prescrites et les mesures qui nécessitent un soutien spécifique (y compris la livraison de nourriture et les achats en ligne prioritaires) pour les personnes désignées comme « vulnérables ». Deuxièmement, il existe des mesures conçues pour contrôler le comportement des personnes qui utilisent ces espaces – par exemple, les règles sur la distance physique et l'utilisation des masques. Nous explorons les préoccupations liées au handicap associées à ces types de mesures. Nous soulignons également les opportunités présentées par cette crise pour intégrer plus fermement l'accessibilité et l'inclusion dans la trame sociale de nos rues et faisons appel à une résistance renouvelée aux politiques façonnées par les attitudes capacitistes.

© 2020 Les Auteurs. Publié par Elsevier Masson SAS au nom de Association ALTER. Cet article est publié en Open Access sous licence CC BY-NC-ND (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Covid-19 hit the world at the end of 2019. Despite unprecedented global collaboration to accelerate the development of a vaccine (World Health Organisation, 2020b), it is unlikely that an effective drug will be available in the immediate future (Anderson, Heesterberg, Klingenberg, & Hollingsworth, 2020). Spaces in which people from different households encounter each other, such as city streets, will therefore continue to pose heightened risks of transmission and infection. Countries in Europe, like those in other parts of the world, have introduced a range of guidelines and regulations designed to minimise these risks. Two broad aims underpin such guidance – first, the need to restrict the usage of such places, particularly at times when transmission rates are very high; and, second, the need to ensure that, for people who are using those spaces, there are systems in place to ensure that they move through them as safely as possible.

In this paper, we draw on experiences in the UK to reflect on the disability-related implications of such guidelines and regulations, using streets in towns and cities as our focus. Section 2 will consider the implications of measures designed to reduce the need for disabled people to use the streets, together with factors which seem to push in the other direction. Section 3 will focus on the implications

for disabled people of moving through those streets in accordance with new coronavirus-related rules and regulations. In Section 4, we will present some concluding thoughts.

2. Disabled people and reducing the need to use town and city streets

In the UK, as elsewhere, early 2020 saw the introduction of lockdown measures prohibiting people from leaving their homes to use streets except in a number of tightly prescribed circumstances – including shopping for food, medicine and other essentials (Ministry of Housing, Communities and Local Government, 2020). This was supplemented by ‘Guidance on shielding and protecting people who are clinically extremely vulnerable from Covid-19’ (Public Health England, 2020a). This identified specific medical conditions which heighten the risks associated with contracting Covid-19; stressed that it was even more important for people with these conditions to stay at home than for others; and set out a range of support to which such people would be entitled, including food delivery and priority in the allocation of online shopping slots.

While this guidance responds to the fact that Covid-19 poses significantly heightened risk for people with certain underlying health conditions (World Health Organisation, 2020a, b), and it undoubtedly reduced the need for many disabled people with relevant conditions to leave their homes and use town and city streets, its operation has been problematic.

Academic literature on the issue is not yet available, but newspapers and social media provide voluminous first-hand accounts of problems experienced by disabled people not falling within the guidance. The Guardian’s investigation into the impact of being left out of the coronavirus ‘vulnerable’ list (Ryan, 2020) reports experiences of exclusion and higher risk faced by people with impairments across the country. For example, a man – who is severely disabled, needs both hips replacing, does not have access to a social support network and does not drive – reported that every day he had to leave home in order to shop for essentials. Similarly, a 58-year-old woman, who has had one leg amputated and occasionally needs to use a wheelchair – and who is a carer for an elderly mother, autistic son and a daughter with mental health conditions – is not included in the list. She reported having to travel to shops hoping not to ‘spread anything or pick anything up’. Stories on Twitter echo such experiences. Blind people (Patel, 2020; Farrow, 2020), people with incurable secondary cancers (Russell, 2020), heart conditions (Fox, 2020) and wheelchair users (Kit, 2020a) all report difficulties caused by not being included in the ‘vulnerable’ list and the consequent need to use the streets in order to shop for essentials.

Concerns around breaking the social distancing guidance and thus unknowingly sharing or contracting the virus dominate, with some accounts suggesting less independency and choice. For example, disabled people not on the ‘vulnerable’ list, but who minimised the need to use streets by relying on support from family, friends or neighbours, report feeling less independent and having reduced choice (Ryan, 2020). The absence of opportunity to make shopping choices converts disabled people into passive and indirect shoppers (Eskyté, 2019b), whose purchase decisions are more illusory than controlled (Kishi, 1988). Where people providing this type of support combine their own shopping with that of a disabled person, further problems can arise. To illustrate, one disabled person using Twitter noted that while her ex-partner was willing to help with shopping and she was able to cope with the feeling of decreased independence, the rule that one shopper was permitted to buy only a limited number of specified items made shopping for two households difficult (Kit, 2020b).

Important contextual factors have operated to disproportionately deny disabled people choice about whether to risk venturing onto town and city streets. For example, shopping online is extremely difficult or impossible for many disabled people because of the complexity and inaccessibility of relevant websites. This is one of the barriers to supermarket shopping which has generated the biggest UK disability discrimination class action of all time (Pring, 2020). Further, lockdown measures made it impossible for many disabled people to access support (including with shopping) from social care and personal assistance schemes. A study conducted by the Research Institute for Disabled Consumers (2020) at the end of March and the beginning of April 2020 found that 50% of the 1649 respondents were no longer receiving health or personal care visits to their homes and 41% were no longer receiving assistance with shopping. Consequently, many people with impairments who would otherwise

choose not to leave home and self-isolate are being forced to use the streets and other public spaces and risk their health and safety.

For all these reasons it is not surprising that 55% of disabled adults aged 16 years and above who took part in a survey conducted by the [Office for National Statistics \(2020\)](#) in May 2020 reported experiencing difficulties accessing groceries, medication and essentials. Many of those reporting such difficulties are likely not to be included in the Covid-19 'vulnerable' list – disabled people who are not regarded as 'vulnerable enough' to receive either the new temporary forms of government support or even, in many cases, support previously available from community support services or supermarkets themselves to enable them to access food. In addition, many people who are on the 'vulnerable' list, and therefore officially qualified for assistance, struggled to book supermarket delivery slots and access other types of support ([Jahshan, 2020](#); [SCOPE, 2020](#)).

3. Disabled people and moving through streets safely and legally

For many disabled people, there are likely to be particular difficulties and challenges associated with moving through the public realm in the era of Covid-19. Accessibility barriers present in the pre-coronavirus world will, of course, generally persist. These include obstacles such as high kerbs, uneven surfaces ([Fänge, Iwarsson, & Persson, 2002](#)), lack of ramps, various footpath- and street crossing-related barriers ([Abir & Hoque, 2011](#); [Imrie, 2012](#)), insufficient lighting and limited places to rest ([Rosenberg, Huang, Simonovich, & Belza, 2012](#)), limited reliability or availability of audible traffic lights ([Ivanchenko, Coughlan, & Shen, 2010](#)), lack of visual aids, lack of kerbs and controlled crossings ([Eskyté, 2019a, b](#)), and others. Such barriers mean that disabled people develop various coping strategies ([Lindsay & Yantzi, 2014](#); [Kirchner, Gerber, & Smith, 2008](#)), including requesting assistance from other pedestrians ([Eskyté, 2019a](#)) and spending more time negotiating barriers and spaces ([Lavery, Davey, Woodside, & Ewart, 1996](#)). Hence, people with impairments who have to use the streets are likely to be exposed to enhanced risks of infection and for longer periods of time than the non-disabled population.

The physical distancing guidance, an important measure adopted by the UK government to limit the spread of the virus, has introduced additional complexity. During the first weeks of June, official advice was to maintain a two-metre distance from another person where possible when outdoors and to limit all non-essential contact ([Public Health England, 2020b](#)). This is likely to be particularly difficult for people with visual impairments, unable to see how close they are to another person; people with mobility impairments, who may not easily be able to adjust their position relative to another person; and people with cognitive impairments or neurodiversity, who may find it difficult to process or understand the need to stay two metres away from others.

Local authorities have been authorised to manage public space and re-configure social interaction outside the home in ways that are sensitive to the particularities of the local population. They have been issued with detailed guidance on how to 'relocate road space to people walking and cycling, both to encourage active travel and to enable social distancing during restart' ([Department for Transport, 2020a](#)). This guidance, however, does not highlight the need to incorporate considerations of accessibility and inclusion into new schemes and approaches. Apart from one reference to parking for Blue Badge holders, the emphasis is on creating safe and pleasant spaces for (non-disabled) pedestrians and cyclists.

Responding to the call to reorganise public space to make physical distancing possible, local authorities around the UK have introduced a range of measures ([NACTO, 2020](#)). For example, Glasgow and Edinburgh have begun introducing 'pop-up' bike lanes and widening pavements ([Dalton, 2020](#)). Hackney Council (East London) is using barriers to widen pavements outside various shops and has introduced parking restrictions aiming to improve safety in busy streets ([Gelder, 2020](#)). [Manchester City Council \(2020\)](#), as well as many other councils, are using Rhino barriers, pedestrian barriers, bollards, traffic cones and signs to achieve physical distancing. [The city of Edinburgh council \(2020\)](#) has introduced shared space schemes for wheelchair users, prams and cyclists.

While accessibility and disability-inclusion have generally not been explicitly addressed in such initiatives, the reorganisation of public space provides an opportunity to tackle and remove pre-existing barriers and to keep the introduction of new ones to a minimum. However, without an explicit focus

on accessibility, there is a risk that this will not happen. Indeed, there is a risk that new barriers will be introduced alongside pre-existing ones, potentially making it more difficult for disabled people to request and receive assistance (Pounds, 2020), or even increasing their risk of accident and injury (Rannard, 2020). For example, many disabled pedestrians experience shared spaces as problematic, barriers such as traffic cones are likely to be problematic for people with visual impairments, and the retention of kerbs and other trip hazards in the middle of what have become widened pavements seem likely to present challenges for people with mobility impairments. Given that physical distancing is likely to be in place for some time (Kissler, Tedijanto, Goldstein, Grad, & Lipsitch, 2020), failure to adequately consider and prioritise accessibility may well result in a long-term deepening of the exclusion and marginalisation already experienced by many disabled pedestrians.

Alongside physical distancing measures, the Westminster government is stepping up recommendations for wearing face coverings in public spaces, especially in public transport settings or enclosed public environments where contact with other people is likely (Department of Health and Social Care, 2020). This practice too has the potential to introduce new forms of exclusion. To begin with, as with the reorganisation of public space, the accessibility aspect of face coverings has not received sufficient attention. Members of the public are being encouraged not to buy medical grade masks but to make their own face coverings to reduce the risk of shortage for frontline health and care workers (Department of Health and Social Care, 2020). On 11 May 2020, the government released guidance on how to make a face mask from an unwanted T-shirt (Public Health England, 2020c). The guidance, however, does not address issues such as making face coverings transparent so as to enable continued communication by people with hearing impairments. A number of charities have now signed a letter asking the government to put the needs of deaf and hard-of-hearing people at the heart of future policies relating to face coverings (Editor, 2020). The guidance on how to make face masks at home was updated on 4 June 2020 (Public Health England, 2020d) but, in failing again to consider transparency, ignored civil society's call to consider the needs of around 11 million deaf or hard-of-hearing people (Hearing Link, 2018) and 151,000 British Sign Language users (British Deaf Association, 2011). In such a context, it is not surprising that the study conducted by Ideas for Ears (2020) at the end of April 2020 found that wearing a non-transparent face mask made life harder for the majority of their respondents (79%). Particular concerns related to the prevention of lipreading (85%), reduced clarity of voice (72%) and reduced volume (55%). In other words, people who rely on lipreading and visual cues are prevented from effective communication and may struggle to understand what is said to them. This is particularly important in the context of redesigning public space as adaptation to changes in the environment requires a variety of resources and resilience (Nelson, Adger, & Brown, 2007; Lindsay & Yantzi, 2014). Inability to communicate with fellow pedestrians because they wear non-transparent face coverings eliminates a possibility for people with hearing impairments to access this important informal resource associated with confident and safe use of city and town streets.

From 15 June 2020, wearing a face covering while on public transport became mandatory (Department for Transport, 2020b). While every passenger is required to wear some sort of face covering, people with certain health conditions and impairments are exempted. The exemption also applies to people who travel with or assist individuals who rely on lipreading and visual cues. This suggests that while the government is reluctant to support the development of deaf-friendly face masks (Philip Gerrard, chief executive at Deaf Action, in Davis, 2020), it is willing to accept the risk of these people spreading or contract the virus. In addition, as Ayla Ozmen, head of research and policy at Action on Hearing Loss notes, little has been done to publicise the exemption policy and fellow passengers therefore are often unaware of it. Consequently, people who are exempt from the policy and do not have visible impairments may encounter the additional problem of unjustified criticism or hostility (Ozmen in Davis, 2020).

4. Conclusion

A public realm that is inclusive and accessible to everyone is a goal for which disabled and older people across the world have long campaigned. Nevertheless, it is one that is difficult to achieve and holding onto it requires constant vigilance. Tackling dominant ableist norms, which shape spaces and practices and which exclude people departing from normative assumptions about ability and

functioning (Goodley, 2014), demands fundamental changes in societal and institutional structures, cultural and everyday life practices.

The re-configuration of public space needed to ensure that physical distancing is possible, provides an opportunity to enhance accessibility and inclusion in our town and city streets. The changes implemented by local authorities demonstrate how creative thinking and problem solving, as well as unconventional decision making, may lead to safer and more people-friendly environments without requiring lengthy timescales or major financial investment. Engaging disabled people's organisations and accessibility specialists, alongside stakeholders such as policy-makers, planners and developers, in the dialogue about achieving what should be the common goal of a more accessible public realm, is a crucial first step on the way to systematic change capable of reshaping present exclusionary practices and structures.

Climate activists, communities and health experts are rightly calling for radical change and highlighting the need to exploit the current situation as an opportunity for rethinking how cities and public spaces are used. Governments and others should ensure that there is a central space within such initiatives for disabled and older people, holding the flag of accessibility and inclusion. A society with cleaner air and reduced infection rates will remain exclusionary and therefore unsustainable if it does not consider the accessibility needs of all its citizens.

Funding

The authors are members of the Inclusive Public Space research team – a project funded by an Advanced Grant from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (Grant agreement no. 787258).

Disclosure of interest

The authors declare that they have no competing interest.

Acknowledgments

The authors are grateful to Monique Bowes for assisting with the French translation of the title, abstract and keywords of this paper; and to David Newman for considerable assistance with proof-reading.

References

- Abir, A. K. M., & Hoque, M. S. (2011). *A study on mobility problem of disabled people in Dhaka city. In 4th annual paper meet and 1st civil engineering congress*. Dhaka: Bangladesh University of Engineering and Technology (pp. 152–61).
- Anderson, R. M., Heesterberg, H., Klingenberg, D., & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *The Lancet*, 395(10228), 931–934.
- British Deaf Association. (2011). *BSL Statistics*. Retrieved June 2020, from <https://bda.org.uk/help-resources/#statistics>
- Dalton, A. (2020). "Pop-up" cycle lanes and widened pavements for Edinburgh and Glasgow. *The Scotsman*. Retrieved May 2020, from <https://www.scotsman.com/news/transport/pop-cycle-lanes-and-widened-pavements-edinburgh-and-glasgow-2545363>
- Davis, N. (2020). Charities for deaf people call for more see-through face masks. *The Guardian*. Retrieved June 2020, from <https://www.theguardian.com/society/2020/jun/16/charities-for-deaf-people-call-for-more-see-through-face-masks>
- Department of Health and Social Care. (2020). *Public advised to cover faces in enclosed spaces*. Retrieved May 2020, from <https://www.gov.uk/government/news/public-advised-to-cover-faces-in-enclosed-spaces>
- Department for Transport. (2020a). *Traffic Management Act 2004: network management in response to COVID-19*. Retrieved May 2020, from <https://www.gov.uk/government/publications/reallocating-road-space-in-response-to-covid-19-statutory-guidance-for-local-authorities/traffic-management-act-2004-network-management-in-response-to-covid-19>
- Department for Transport. (2020b). *Face coverings to become mandatory on public transport*. Retrieved June 2020, from <https://www.gov.uk/government/news/face-coverings-to-become-mandatory-on-public-transport>
- Editor. (2020). *Deaf professionals write open letter advocating for transparent face masks (with BSL video)*. The Limping Chicken. Retrieved June 2020, from <https://limpingchicken.com/2020/06/05/deaf-professionals-write-open-letter-advocating-for-transparent-face-masks-with-bsl-video/>
- Eskyte, I. (2019a). When accessibility of public space excludes: Shopping experience of people with vision impairments. *The Journal of Public Space*, 4(4), 37–60.
- Eskyte, I. (2019b). *Disability and shopping: Customers, markets and the state*. London: Routledge.

- Fänge, A., Iwarsson, S., & Persson, Å. (2002). Accessibility to the public environment as perceived by teenagers with functional limitations in a south Swedish town centre. *Disability and Rehabilitation*, 24(6), 318–326.
- Farrow, A. (2020). *[@PeerSupport4All]. I tried also to do a home delivery, but I was also told that I was not classed as vulnerable even though I am registered as blind too.* [Tweet]. Twitter. <https://twitter.com/PeerSupport4All/status/1245296804142485505>
- Fox, L. (2020). *Hope you got all the shopping you needed. I know the feeling, even with a heart condition I am no longer classed as vulnerable or at high risk apparently, even though 3 weeks ago I was. No delivery or click and collect for me, shopping it is then!* [Tweet]. Twitter. <https://twitter.com/lfox1961/status/1245460003038920709>
- Gelder, S. (2020). *Hackney Council to widen pavements and suspend parking to help with social distancing.* Hackney Gazette. Retrieved May 2020, from <https://www.hackneygazette.co.uk/news/pavements-to-be-widened-as-part-of-hackney-council-social-distancing-measures-1-6629846>
- Goodley, D. (2014). *Disability studies – theorising disablism and ableism.* London: Routledge.
- Hearing Link. (2018). *Facts about deafness and hearing loss.* Retrieved June 2020, from <https://www.hearinglink.org/about-hearing/facts-about-deafness-hearing-loss/>
- Ideas for Ears. (2020). *Survey results – impact of masks, 2m distancing and more.* Retrieved June 2020, from <https://www.ideasforears.org.uk/blog/survey-results-impact-or-masks-and-more/>
- Imrie, R. (2012). *Auto-disabilities: The case of shared space environments.* *Environment and Planning-Part A*, 44(9), 2260–2277.
- Ivanchenko, V., Coughlan, J., & Shen, H. (2010). *Real-time walk light detection with a mobile phone.* In K. Miesenberger, J. Klaus, W. Zagler, & A. Karshmer (Eds.), *Computers Helping People with Special Needs.* Berlin: Springer (pp. 229–234).
- Jahshan, E. (2020). *Waitrose apologises after elderly struggle to secure delivery slots.* Retail Gazette. Retrieved May 2020, from <https://www.retailgazette.co.uk/blog/2020/04/waitrose-apologises-after-elderly-struggle-to-secure-delivery-slots/>
- Kirchner, C. E., Gerber, E. G., & Smith, B. C. (2008). *Designed to deter: Community barriers to physical activity for people with visual or motor impairments.* *American Journal of Preventive Medicine*, 34(4), 349–352.
- Kishi, G. (1988). *Daily decision-making in community residences: A social comparison of adults with and without mental retardation.* *American Journal of Mental Retardation*, 92, 430–435.
- Kissler, M. S., Tedijanto, C., Goldstein, E., Grad, Y. H., & Lipsitch, M. (2020). *Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period.* *Science*, 368(6493), 860–868.
- Kit. (2020a). *[@solitaryrainbow]. I'm a wheelchair user & usually take my 11 year old with me when I shop. I'm currently reliant on ex-husband to shop me and praying everything on my Waitrose order gets delivered on the 14th. Don't meet the priority criteria for any supermarket so not sure what I'll do long term.* [Tweet]. Twitter. <https://twitter.com/solitaryrainbow/status/1245286463144628225>
- Kit. (2020b). *[@solitaryrainbow]. Ex is a good bloke and is happy to do it for me. but I hate losing this independence and I'm worried about what I'll do after my next shop (I managed to get a slot for the 14th). The item limits are also difficult when he's shopping for two households.* [Tweet]. Twitter. <https://twitter.com/solitaryrainbow/status/1245424596473577475>
- Lavery, I., Davey, S., Woodside, A., & Ewart, K. (1996). *The vital role of street design and management in reducing barriers to older peoples' mobility.* *Landscape and Urban Planning*, 35(2–3), 181–192.
- Lindsay, S., & Yantzi, N. (2014). *Weather, disability, vulnerability, and resilience: Exploring how youth with physical disabilities experience winter.* *Disability and Rehabilitation*, 36(26), 2195–2204.
- Manchester City Council. (2020). *Footpath widening for social distancing.* Retrieved June 2020, from <https://secure.manchester.gov.uk/info/500348/walking/7961/footpath-widening-for-social-distancing/2>
- Ministry of Housing, & Communities and Local Government. (2020). *Entertainment and hospitality premises to close temporarily and people urged to only travel if absolutely essential.* Retrieved June 2020, from <https://www.gov.uk/government/news/government-announces-further-measures-on-social-distancing>
- NACTO. (2020). *Transportation Actions Updates.* Retrieved June 2020, from https://docs.google.com/spreadsheets/d/1xBf6gMAwNSzNtr0-CbK_uTA0ZapWGfOP58Dfn6qec6Y/edit#gid=1842955073
- Nelson, D. R., Adger, W. N., & Brown, K. (2007). *Adaptation to environmental change: Contributions of a resilience framework.* *Annual Review of Environment and Resources*, 32, 395–419.
- Office for National Statistics. (2020). *Coronavirus and the social impacts on disabled people in Great Britain.* Retrieved May 2020, from <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/disability/articles/coronavirusandthesocialimpactsondisabledpeopleingreatbritain/may2020>
- Patel, A. (2020). *[@BlindDad.Uk]. I'm back at @sainsburys bright & early today with @Kika_GuideDog to do our weekly shop. Despite being blind, I'm not judged vulnerable enough to get a priority home delivery slot so I have no choice than to venture out. How did you find getting groceries this week? #COVID19.* [Tweet]. Twitter. <https://twitter.com/BlindDad.Uk/status/1245247899698692096>
- Pounds, K. (2020). *Coronavirus: Being blind during the pandemic.* BBC News. Retrieved May 2020, from <https://www.bbc.co.uk/news/disability-52118942>
- Pring, J. (2020). *Coronavirus: Supermarkets face 'biggest class action of its kind' over discrimination claims.* Disability News Service. Retrieved May 2020, from <https://www.disabilitynewsservice.com/coronavirus-supermarkets-face-biggest-class-action-of-its-kind-over-discrimination-claims/>
- Public Health England. (2020a). *Guidance on shielding and protecting people who are clinically extremely vulnerable from COVID-19.* Retrieved April 2020, from <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>
- Public Health England. (2020b). *Guidance on social distancing for everyone in the UK.* Retrieved April 2020, from <https://www.gov.uk/government/publications/covid-19-guidance-on-social-distancing-and-for-vulnerable-people/guidance-on-social-distancing-for-everyone-in-the-uk-and-protecting-older-people-and-vulnerable-adults>
- Public Health England. (2020c). *Guidance on how to wear and make a cloth face covering.* Retrieved May 2020, from <https://www.gov.uk/government/publications/how-to-wear-and-make-a-cloth-face-covering>
- Public Health England. (2020). *Guidance on how to wear and make a cloth face covering.* Updated 4 June 2020. Retrieved June 2020, from <https://www.gov.uk/government/publications/how-to-wear-and-make-a-cloth-face-covering/how-to-wear-and-make-a-cloth-face-covering>

- Rannard, G. (2020). *Coronavirus: Challenge of reshaping UK cities after lockdown*. BBC News. Retrieved May 2020, from <https://www.bbc.co.uk/news/uk-52524807>
- Research Institute for Disabled Customers. (2020). *RiDC Covid-19 Survey*.. Retrieved June 2020, from http://www.ridc.org.uk/sites/default/files/uploads/Research%20Reports/Covid19_030420/RiDC_Covid19_FullResults_030402020.pdf
- Rosenberg, D. E., Huang, D. L., Simonovich, S. D., & Belza, B. (2012). *Outdoor built environment barriers and facilitators to activity among midlife and older adults with mobility disabilities*. *The Gerontologist*, 25, 1–12.
- Russell, S. (2020). [*@clarky382*]. *It's absolutely ridiculous, how are you not vulnerable? Apparently I am not ill enough?!?* [Tweet]. Twitter. <https://twitter.com/clarky382/status/1245251417381666816>
- Ryan, F. (2020). *Disabled people left off coronavirus vulnerable list tell of struggles*. The Guardian. Retrieved April 2020, from https://www.theguardian.com/society/2020/apr/27/disabled-people-left-off-coronavirus-vulnerable-list-tell-of-struggles?CMP=Share_iOSApp_Other
- SCOPE. (2020). *Disabled people forced to risk health and endure humiliating experiences just to buy food*.. Retrieved May 2020, from <https://www.scope.org.uk/media/press-releases/disabled-people-struggling-to-get-food-and-essentials/>
- The city of Edinburgh council. (2020). *Spaces for people – temporary changes in place*.. Retrieved June 2020, from <https://www.edinburgh.gov.uk/spaces-people-1/emergency-measures-pedestrians-cyclists-coronavirus>
- World Health Organisation. (2020a). *Coronavirus*.. Retrieved May 2020, from https://www.who.int/health-topics/coronavirus#tab=tab_1
- World Health Organisation. (2020b). *Disability considerations during the COVID-19 outbreak*.. Retrieved May 2020, from <https://www.who.int/publications/i/item/disability-considerations-during-the-covid-19-outbreak>