

## Wales COVID-19 Evidence Centre (WCEC) Rapid Review

### Impact of the COVID-19 pandemic on the health and access to health care of disabled people: a rapid review Report number – RR00025 (March 2022)

#### Rapid Review Details

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# Impact of the COVID-19 pandemic on the health and access to healthcare of disabled people: a rapid review

## Report number – RR00025 (March 2022)

### TOPLINE SUMMARY

#### What is a Rapid Review?

Our rapid reviews use a variation of the systematic review approach, abbreviating or omitting some components to generate the evidence to inform stakeholders promptly whilst maintaining attention to bias. They follow the methodological recommendations and minimum standards for conducting and reporting rapid reviews, including a structured protocol, systematic search, screening, data extraction, critical appraisal, and evidence synthesis to answer a specific question and identify key research gaps. They take 1- 2 months, depending on the breadth and complexity of the research topic/ question(s), extent of the evidence base, and type of analysis required for synthesis.

This report is linked to a prior rapid evidence map published as: Impact of the COVID-19 pandemic on disabled children and adults across the Equality and Human Rights Commission life domains: a rapid evidence map, report number –

[http://www.primecentre.wales/resources/REM00025\\_Wales\\_COVID-19\\_Evidence\\_Centre\\_Rapid\\_Evidence\\_Map\\_of\\_health\\_effects\\_of\\_COVID\\_on\\_disabled\\_March\\_2022.pdf](http://www.primecentre.wales/resources/REM00025_Wales_COVID-19_Evidence_Centre_Rapid_Evidence_Map_of_health_effects_of_COVID_on_disabled_March_2022.pdf)

#### Background / Aim of Rapid Review

The Equality, Inclusion and Human Rights Branch of Welsh Government suggested the research question based on the findings of the '[Locked out: liberating disabled people's lives and rights in Wales beyond COVID-19](#)' report, with the aim to inform the work of the Disability Rights Taskforce, Welsh Government. This Rapid Review follows on from a Rapid Evidence Map (REM 00025 [http://www.primecentre.wales/resources/REM00025\\_Wales\\_COVID-19\\_Evidence\\_Centre\\_Rapid\\_Evidence\\_Map\\_of\\_health\\_effects\\_of\\_COVID\\_on\\_disabled\\_March\\_2022.pdf](http://www.primecentre.wales/resources/REM00025_Wales_COVID-19_Evidence_Centre_Rapid_Evidence_Map_of_health_effects_of_COVID_on_disabled_March_2022.pdf) ) based on scoping review methodology, which was used to identify a research area to prioritize. Informed by the evidence map, which incorporated evidence spanning all six Equality and Human Rights Commission (EHRC) domains, 'Health' was selected as the focus of this review. The review also focused on UK peer reviewed studies and robust grey literature reporting outcomes not captured by the peer reviewed studies.

#### Key Findings

##### *Extent of the evidence base*

- 19 (18 peer-reviewed) UK studies (10 quantitative, 5 qualitative, 4 mixed methods) were included.
- 8 studies included adults (5 included specific impairments), 7 children (all included specific impairments), and 4 included both adults and children (3 studies included people with learning impairments). 3 studies considered disabled people as a whole group.
- 7 studies made comparisons either to pre-pandemic data or to non-disabled people.
- None of the studies were exclusively of Welsh populations.
- The research may not be representative of populations from low socioeconomic backgrounds or Black, Asian and Minority Ethnic communities.
- No studies were identified concerning COVID-19 vaccination status of disabled people.

##### *Key findings*

- Studies reporting on access to health care (n=7) identified several concerns or issues with accessing services. One study reported that **disabled people were over twice as likely to report waiting for a health intervention** during the first wave of the COVID-19 pandemic compared to non-disabled people and **were substantially more likely to report needing to access various services** than non-disabled people. **Experience and access to remote services varied**. There were some positive reports for **telehealth** but this was not universal and individual needs have to be carefully considered. The use of **facemasks** and the **lack of face-to face appointments or replacement with other means** had an **impact on the abilities of people with hearing loss to hear and communicate**.
- Studies reporting on health outcomes (n=7) focused on outcomes as a result of the impact of the COVID-19 pandemic. Disabled people were **no more likely to report COVID-19 symptoms** than non-disabled people but were **more likely to be hospitalised** due to COVID-19. In comparison to general population controls, **patients with learning impairment were less likely to receive non-invasive respiratory support, intubation, and or to be admitted to the ICU** while in hospital (no data were collected on the reasons why). **Hospital stay was, on average 3.5 days longer for these study participants compared to controls**.
- Studies exploring mortality rates (n=3) between disabled people and non-disabled people reported considerable inequalities in the mortality rates for disabled people. Notably, the Office for National Statistics (2021) found the risk of death involving COVID-19 was **3.1 times greater for more-disabled men and 1.9 times greater for less-disabled men**, compared with non-disabled men; among women, the risk of death was **3.5 times greater for more-disabled women and 2.0 times greater for less-disabled women**, compared with non-disabled women. Statistical methods could not identify a single factor to explain the greater risks of death; the **place of residence, socio-economic and geographical circumstances, and pre-existing health conditions all contributed**.
- Studies reporting on mental health (n=13) identified a **range of negative impacts** for both **adults and children**, although one study looking at the impacts **on children with a learning impairment** found **no difference between pre- and post-lockdown periods**; there were also **some reports of improvements in mental health** such as for children who felt safer at home or who had school related stress. Adults with a hearing loss reported enjoying quieter outdoor environments and relief at not having to attend social gatherings. One study noted that **Third sector organisations** had a **positive impact upon mental health and wellbeing** by filling gaps in social care. It was clear that individual experiences varied.

#### *Recency of the evidence base*

- Most (n=17) of the included studies were published in 2021.
- Most (n=16) **included data were from 'wave 1'**. Two studies (Williamson et al. 2021; Office for National Statistics 2021) collected data from 'wave 2' (Winter 2020-21), before the vaccination roll out.

#### *Best quality evidence*

- Two quantitative studies (Office for National Statistics 2021; Williamson et al. 2021) used large patient level datasets to investigate COVID-19 related mortality.

#### **Policy Implications**

- The research highlighted challenges experienced by disabled people in accessing health services. The **social model** is preferable over the medical model to understand these challenges (and their interactions), and the range of situational influences and contextual barriers that must be addressed.

- The findings demonstrate that although **telehealth can be of value for some**, this is not universal and individual needs have to be carefully considered.
- More research is needed to evaluate the cross-cutting impact of **other areas of potential inequalities**.
- Consideration needs to be given to the recovery plans for patient services and how these will **address the needs of disabled people**.
- **No studies were identified concerning COVID-19 vaccination status of disabled people**. Though it should be noted that all the included studies were conducted prior to the roll-out of the vaccination programme.

### **Strength of Evidence**

There was considerable variation between included studies in terms of their study design, populations, and outcomes. Study quality ranged from low to moderate, as all of the studies had some weaknesses either in the way they were conducted or in the reporting of their methods.

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**Abbreviations:**

<b>Acronym</b>	<b>Full Description</b>
ASND	Additional support needs and disabilities
CASP-12	Control, Autonomy, Self-realization, and Pleasure scale
EHRC	Equality and Human Rights Commission
ELSA	English Longitudinal Study of Ageing
HR	Hazard ratios
ICU	Intensive Care Units
JBI	Joanna Briggs Institute
MDT	Multidisciplinary team
NS	Unclear or not specified
ONS	Office for National Statistics
PAN	Throughout the pandemic
PPE	Personal Protective Equipment
PRE	Pre-pandemic
RCT	Randomized controlled trial
SEND	Special educational needs and disabilities
SI	Sight impaired
SSI	Severely sight impaired
T1	First trough
T2	Second trough
UK	United Kingdom
W1	First wave
W2	Second wave
W3	Third wave

## 5. BACKGROUND

This Rapid Review is being conducted as part of the Wales COVID-19 Evidence Centre Work Programme. The Equality, Inclusion and Human Rights Branch of Welsh Government suggested the research question based on the findings of the 'Locked out: liberating disabled people's lives and rights in Wales beyond COVID-19' report, with the aim of informing the work of the Disability Rights Taskforce, Welsh Government.

### Purpose of this review

The Disability Rights Taskforce was set up by Welsh Government to take forward and expand on the recommendations in the Locked out: liberating disabled people's lives and rights in Wales beyond COVID-19 report. The Taskforce requires clear evidence-based support to help establish its priorities and actions and to expand on the initial research undertaken as part of this report. An initial rapid evidence summary, suggested that disabled people have experienced inequalities and disadvantage during the COVID-19 pandemic, including mortality, access to services, financial difficulties, isolation and loneliness and potentially other inequalities. In order to determine priorities and actions, the extent and scope of the current evidence base was first analysed using a rapid evidence map ([http://www.primecentre.wales/resources/REM00025\\_Wales\\_COVID-19\\_Evidence\\_Centre\\_Rapid\\_Evidence\\_Map\\_of\\_health\\_effects\\_of\\_COVID\\_on\\_disabled\\_March\\_2022.pdf](http://www.primecentre.wales/resources/REM00025_Wales_COVID-19_Evidence_Centre_Rapid_Evidence_Map_of_health_effects_of_COVID_on_disabled_March_2022.pdf)) looking at evidence across the six Equality and Human Rights Commission (EHRC) domains to identify where a rapid review was most feasible<sup>1</sup>. Informed by the rapid evidence map, stakeholders from the Equality, Inclusion and Human Rights Branch of Welsh Government selected 'Health' as the focus of this rapid review from studies published in the peer-reviewed literature.

## 6. RESULTS

### 2.1 Overview of the Evidence Base

From the rapid evidence map, 56 studies were identified concerning the health of disabled people. Of those 56 studies, 18 were reported in peer-reviewed publications providing reasonable methodological detail allowing assessment of the validity of the results (Abrar et al. 2021; Asbury et al. 2021; Bailey et al. 2021; Baksh et al. 2021; Couper-Kenney & Riddell 2021; Greenway & Eaton-Thomas 2020; Jackson et al. 2021; Kavanagh et al. 2021; Naylor et al. 2021; Patel et al. 2021; Paulauskaite et al. 2021; Rauf et al. 2021; Rawlings et al. 2021; Shakespeare et al. 2021; Steptoe & Di Gessa 2021; Theis et al. 2021; Williamson et al. 2021; Wolstencroft et al. 2021). These were selected for inclusion alongside an additional

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<sup>1</sup> The previously completed review using rapid scoping methodology has been published separately as a WCEC Rapid Evidence Map: Impact of the COVID-19 pandemic on disabled children and adults across the Equality and Human Rights Commission life domains: a rapid evidence map, report number – REMXXX December 2021. The findings of this earlier scoping review and the intended focus of the subsequent rapid review were discussed at a Stakeholder meeting held on the 20th of December 2021.

well reported study (Office for National Statistics 2021) which provided important outcomes not captured in the other studies.

**Study design and sample size:** Most of the studies were of a quantitative design (n=10), 5 were qualitative and 4 were mixed methods. Two of the quantitative studies used large patient level data sets: 29,295,161 from the 2011 Census (Office for National Statistics 2021) and 16,939,041 (Williamson et al. 2021). The median sample size for the other 7 quantitative studies was 2,527.5 (interquartile range 263 – 8,795), the data distribution was skewed by a single outlier with a sample size of 130,000 (Jackson et al. 2021). Table 1 shows the studies included in this review by overall study design and the EHRC health indicator that was explored.

**Quality assessment:** The studies varied in terms of their populations and outcomes that were considered and evaluated, thus making it difficult to draw clear conclusions for disabled people as a whole group. Of the 10 quantitative studies, 7 made comparisons either to pre-pandemic data or to non-disabled people (Bailey et al. 2021; Baksh et al. 2021; Jackson et al. 2021; Office for National Statistics 2021; Rauf et al. 2021; Steptoe & Di Gessa 2021; Williamson et al. 2021). **All the studies had some weaknesses**, either in the way they were conducted or in the reporting of their methods. Issues included, but were not limited to: self-report of disabled status which could vary between individuals and their own experiences; small sample sizes; lack of sample eligibility criteria and lack of demographic details. Therefore, the overall evidence base is considered to be of low to moderate quality.

**Table 1. Included studies by overall study design and EHRC health indicator**

	<b>Quantitative</b>	<b>Qualitative</b>	<b>Mixed Methods</b>
<b>Access to Healthcare</b>	Kavanagh (2021) Jackson (2021) Naylor (2021) Rauf (2021)		Paulauskaite (2021) Rawlings (2021) Wolstencroft (2021)
<b>Health Outcomes</b>	Baksh (2021) Kavanagh (2021) Naylor (2021) ONS (2021) Williamson (2021)	Abrar (2021) Couper-Kenney (2021)	
<b>Mental Health</b>	Bailey (2021) Kavanagh (2021) Naylor (2021) Steptoe (2021) Theis (2021)	Abrar (2021) Asbury (2021) Couper-Kenney (2021) Patel (2021) Shakespeare (2021)	Greenway (2020) Paulauskaite (2021) Wolstencroft (2021)

ONS: Office for National Statistics



**Data collection periods:** In order to summarise data collection periods in a meaningful way in relation to UK COVID-19 pandemic waves<sup>2</sup>, the following coding was devised:

- Pre-pandemic (PRE): before March 2020
- First wave (W1): March 2020 – end of June 2020
- First trough (T1): July 2020 – end of August 2020
- Second wave (W2): September 2020 – end of April 2021
- Second trough (T2): May 2021 – end of June 2021
- Third wave (W3): July 2021 – present
- Throughout the pandemic (PAN): from March 2020 onwards
- Unclear or not specified (NS)

Four of the studies collected data in two separate periods (Bailey et al. 2021; Jackson et al. 2021; Rauf et al. 2021; Williamson et al. 2021) with **3** of those collecting and **comparing pre-pandemic data** (Bailey et al. 2021; Jackson et al. 2021; Rauf et al. 2021). **The majority** (n=16) of studies included data from **‘wave 1’** (Asbury et al. 2021; Bailey et al. 2021; Baksh et al. 2021; Couper-Kenney & Riddell 2021; Greenway & Eaton-Thomas 2020; Jackson et al. 2021; Kavanagh et al. 2021; Naylor et al. 2021; Office for National Statistics 2021; Patel et al. 2021; Paulauskaite et al. 2021; Rauf et al. 2021; Rawlings et al. 2021; Steptoe & Di Gessa 2021; Theis et al. 2021; Williamson et al. 2021). Two studies only collected data during the ‘first trough’ (Shakespeare et al. 2021; Wolstencroft et al. 2021). Only two studies collected data from ‘wave 2’ (Williamson et al. 2021; Office for National Statistics 2021). In one study data collection dates were not provided (Abrar et al. 2021).

**Location:** the included studies involved people from throughout the United Kingdom. Some were conducted within specific UK nations, none of the studies were conducted exclusively with Welsh populations. The break-down is as follows: United Kingdom=7; England=7 (4 being specific regions); Northern Ireland=1; Scotland=2 (1 being a specific region); Wales=0; England and Scotland=2.

**Participant demographics:** 8 studies investigated adult outcomes (Abrar et al. 2021; Jackson et al. 2021; Kavanagh et al. 2021; Naylor et al. 2021; Office for National Statistics 2021; Patel et al. 2021; Rawlings et al. 2021; Steptoe & Di Gessa 2021) with five including people with specific impairments. Seven studies investigated child outcomes, mostly parent reported (Asbury et al. 2021; Bailey et al. 2021; Couper-Kenney & Riddell 2021; Greenway & Eaton-Thomas 2020; Paulauskaite et al. 2021; Theis et al. 2021; Wolstencroft et al. 2021) all of which included children with specific impairments. Four studies included both adults and children (Baksh et al. 2021; Rauf et al. 2021; Shakespeare et al. 2021; Williamson et al. 2021), 3 of the studies included people with learning impairments (Baksh et al. 2021; Rauf et al. 2021; Williamson et al. 2021). Only 3 of the 19 studies considered outcomes for disabled

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<sup>2</sup> UK Government. (2022). Coronavirus (COVID-19) in the UK dashboard – cases by date reported. Available at: [www.coronavirus.data.gov.uk/details/cases](http://www.coronavirus.data.gov.uk/details/cases) [Accessed: 16 February 2022]

people as a whole group rather than by specific impairments (Kavanagh et al. 2021; Office for National Statistics 2021; Shakespeare et al. 2021).

## 2.2 Main findings by EHRC Health Domain Indicators

### 2.2.1 Access to healthcare:

#### General – children with developmental delays and challenging behaviours

**Paulauskaite et al. (2021)** used survey questions in **May to July 2020** to understand the experience of the pandemic on 88 families of very young children (pre-school) with moderate to severe development delays and challenging behaviours. Closed-ended and multiple-choice questions were used to ask about pandemic experiences (well-being, challenges and access to services/support) and an open-ended question was asked about concerns of long-term impacts. There was a lack of detail about the children's characteristics. It is unclear how representative the sample was of the target population and the authors note a lack of representation from Black, Asian and Minority Ethnic groups. The majority (91%) of the sample had had difficulty **maintaining support** for their child with a number of **disruptions to accessing healthcare (76%)** also mentioned. Parents found it difficult to engage their child in **telehealth appointments (85%)**. Future concerns (noted in free text responses to a question about this) included whether they would be able to **access pre-pandemic booked health appointments**.

#### General – children with significant limitations in cognitive and adaptive skills

Using a mixed method approach (online survey and semi-structured interviews, collected in **mid-July 2020**), **Wolstencroft et al. (2021)** examined the pandemic experiences of 23 families with children (aged 5 to 15 years) with significant limitations in cognitive and adaptive skills reported by mothers. More details of recruitment and the sample are needed in order to assess potential biases in the study. The authors note that the sample was mostly white mothers who were co-parenting and that experiences are likely to differ for non-white, non-female, single parents. Provision of **support** for children's medical and psychological needs varied considerably. Routine **medical and social care appointments** had been **cancelled or postponed** for the vast **majority (91%)**. Some reported positively on **telehealth** whereas others found their children's needs were too complex for telehealth appointments or their children could not engage.

#### General – children and adults

**Kavanagh et al. (2021)** conducted a cross-sectional survey to understand the health and health care experiences of disabled people compared to non-disabled people during the early stages of the COVID-19 pandemic in the UK. This was part of an existing longitudinal study. They collected interview/survey data in **April-May 2020** using population-based cluster sampling based on a national database of postcode addresses, as part of the longitudinal 'Understanding Society' survey. The sample comprised 12,703 people aged 16-64 years, of which 17.4% reported a disability. Disabled people tended to be older, female and of white UK ethnicity compared to non-disabled people. **Disabled people** were over **twice as likely** to report **waiting for a health intervention during the first wave of the**

**COVID-19 pandemic compared to non-disabled people:** risk ratio 2.41 (95% CI 2.12, 2.74). There was no greater likelihood of treatment cancellation for disabled people compared to non-disabled people. **Disabled people were substantially more likely to report difficulty accessing over the counter medicines compared to non-disabled people:** relative risk 2.42 (95% CI 1.58, 3.72). Among people reporting a longstanding, chronic condition, **disabled people were substantially more likely to report needing a general practitioner, needing a prescription, needing pharmacy advice and needing an outpatient visit than non-disabled people.**

### **Audiology service provision - adults**

**Naylor et al. (2020)** aimed to explore the perceived effects of **social distancing restrictions and safety measures** on people with **hearing loss**. They issued, between **29 May and 15 June 2020**, a 24-item 5-point Likert Scale survey to **adult participants** with a hearing loss recruited via Hearing Sciences – Scottish Section of the University of Nottingham (Glasgow). Of 308 potential participants, 129 responded. The majority had mild hearing loss, 59% (n=76), their ages ranged from 27 to 76 years (mean 64.4) and 51.9% (n=67) were male. Participants were grouped according to a self-reported unaided hearing ability in answer to the question ‘How is your hearing (when not wearing hearing aids?)’ with possible answers: very good, good, middling, poor or very poor; better 53% (n=68) and worse 47% (n=61). There were some **concerns with the study methodology** with regard to reporting of demographic details and the contribution of confounding factors to the findings. **Some** participants were **concerned** over the **lack** of audiology services and there was **some** concern that **face masks** interfere with wearing hearing aids.

### **Mental health service – children and adults**

The service evaluation conducted by **Rauf et al. (2021)** examined the impact of COVID-19 lockdown restrictions on overall total consultations within adult and child and adolescent mental health services (CAMHS) community learning impairment teams and use of psychotropic medications in people with significant impairments of both intellectual and adaptive functioning and/or autism spectrum disorder, comparing activity before and during the first COVID-19 related lockdown. Data from 2,909 psychiatric consultations in Coventry and Warwickshire were collected **over a 6-month period**, including a 12-week pre-lockdown (1 January to 22 March 2020) and 14-week lockdown period (23 March to 30 June 2020). Compared to pre-lockdown data, **there was a substantial increase in child/adolescent and adult psychiatric consultations during the first COVID-19 related lockdown**. There was an increase of 14.5% in psychiatric consultations during lockdown: from 1218 psychiatric consultations across the service (133 in child and adolescent services and 1085 in adult services), amounting to an average of 103 consultations per week (pre lockdown) to 1691 psychiatric consultations across the service (227 in child and adolescent services and 1464 in adult services) during lockdown, amounting to an average of 118 consultations per week. **During the first lockdown there was a substantial, fourfold increase in psychiatric multidisciplinary team (MDT) consultations**. Before lockdown, MDT input was in 2 contacts out of 133 consultations (0.17 per week). During lockdown, MDT input was in 10 contacts out of 227 consultations (0.71 per week). This fourfold per week increase in

MDT input predominantly involved community nursing, occupational therapy and psychologists.

### **Optometry and ophthalmology services - adults**

**Jackson et al. (2021)** undertook a study of 130,000 **optometry referrals** in Northern Ireland, comparing activity before the COVID-19 pandemic with that during the first wave of the pandemic. Data collection was via cross sectional surveys, **undertaken in four periods:** Period 1: 01/01/19-18/03/19, Period 2: 19/03/19-18/06/19, Period 3: 01/01/20-18/03/20 and Period 4: 19/03/20-18/06/20. 115 people were certified as sight impaired (SI) or severely sight impaired (SSI). **From March to June 2020 there was a drastic reduction in the number of general ophthalmic services (primary care) consultations and hospital eye service consultations.** For primary care the reduction was from 105,783 to 3,142 consultations and in hospital care the reduction was from 18,822 to 7,417 consultations. In the same period age related macular degeneration consultations reduced from 4,380 to 2,703 consultations, and glaucoma consultations reduced from 1,342 to 604 consultations. **The numbers of 'certificate of vision impairment' certifications following the introduction of COVID-19 lockdown fell by 68%, compared to the 2019 data.** Of new certifications issued in the first wave of the pandemic, there was a **substantial increase in the proportion of those certified as severely sight impaired** as opposed to sight impaired: from 68% in 2019 to 84%. There was a **significant worsening of mean visual acuity** of people certified in the period after the onset of lockdown, when compared to those certified in the periods before the pandemic. The authors concluded that the **certification pattern mirrored how appointments were reprioritised during the first lockdown** and that a **significant wave of unmet eye health need was anticipated** to be building as a result.

### **Remote services - adults**

**Rawlings et al. (2021)** explored the **acceptability and accessibility** of providing **telephone and videoconference-mediated psychological interventions** in individuals with **learning impairments** using a mixed methods design. In **May 2020**, **22 adult clients** in a Metropolitan Borough in the north of England who were referred for psychological therapy were assessed for suitability for remote therapy. Of these 7 (6 women and 1 man) agreed to participate and were contacted by telephone. Two service users had some degree of hearing loss. The **study is of low quality** due to the sample size and the lack of detail on the methods used. The sample size is difficult to overcome as not all clients were suitable for remote therapy and not all were then suitable to take part in the study due to difficulties in communication via telephone. Overall **none** of the clients **felt unhappy** with having **therapy over the phone** but **only one client felt "happy"** about having **therapy over video**. Clients described concerns that they had about remote therapy but also one client described how phone therapy might be easier. **All clients** stated that they would **prefer** to receive **educational materials via post** rather than by email or over the phone. There was a mixed response with regard to the use of technology for communication.

## 2.2.2 Health outcomes:

### COVID-19 outcomes (not mortality) – children and adults

The case control study by **Baksh et al. (2021)** investigated the inequalities in COVID-19 outcomes following hospital admission for people with impairments in cognition, language, motor and social abilities (described and abbreviated here by the authors as intellectual disability, ID) compared to the general population. The study used data from the International Severe Acute Respiratory and emerging Infections Consortium (ISARIC) WHO Clinical Characterisation Protocol UK (CCP-UK) cohort study. Between **February 2020 and 9 July 2020**, 506 people with ID admitted to acute care hospitals in the UK that had complete data on age group, sex and ethnicity were matched in 1:3 ratio to 1518 **general population controls**. The ID sample consisted predominantly of adults over the age of 40 (75%, with 7.7% less than 20 years of age), were mostly male (56.5%) and white ethnicity (86.6%). Subjectively reported signs and **symptoms** such as loss of taste/smell, as well as those related to pain (headache, chest pain and muscle aches) were all **reported less frequently in patients with ID**. On the other hand, altered consciousness or confusion (29.9% vs 17.6%) and seizures (9.9% vs 2.2%) were more common in patients with ID. Compared with controls, ID patients were admitted with higher respiratory rates (**median 22 vs. 21, p=0.009**) and were more likely to require oxygen therapy (**35.1% vs. 28.9%, p=0.011**). **Medical complications** were comparable between patients with ID and controls, with the exception of seizures which were **more prevalent in the ID group** (5.1% of those with ID compared with 2.0% of the control group). **Significantly fewer ID patients were admitted to Intensive Care Units (ICU)**, underwent intubation or received non-invasive respiratory support compared with controls. Adjusted for age group, sex, severity of illness on admission, number of comorbidities and Down syndrome diagnosis, **patients with ID were 37% less likely to receive non-invasive respiratory support**, 40% less likely to receive intubation and 50% less likely to be admitted to the ICU while in hospital. Thus, indicating potential disparity in access to appropriate treatment, but no data were collected on the reasons why. **Hospital stay was, on average 3.5 days longer for people with ID compared to controls**. Controls spent a mean of 10.98 days in hospital (SD=14.45, median=6.5 days) while the ID group spent 14.55 days on average (SD=13.29, median=11 days).

**Kavanagh et al. (2021)** conducted a cross-sectional survey to understand the health and health care experiences of disabled people compared to non-disabled people during the early stages of the COVID-19 pandemic in the UK. They collected interview/survey data in **April-May 2020** using population-based cluster sampling based on a national database of postcode addresses, as part of the longitudinal 'Understanding Society' survey. The sample comprised 12,703 adults of age 16-64 years, of which 17.4% reported being disabled. Disabled people tended to be older, female and of white UK ethnicity compared to non-disabled people. **Disabled people were no more likely to report COVID-19 symptoms** than non-disabled people but were **more likely to be hospitalised** due to COVID-19: RR 3.0 (95% CI 1.07, 8.03). **Disabled people were substantially more likely to report a longstanding health condition and to have been instructed to shield** during the first wave of the COVID-19 pandemic than non-disabled people.

## **Mortality - adults**

The **Office for National Statistics (2021)** using **routinely collected data** provided estimates of **COVID-19 related deaths by disability status** (n=5,038,767; 17.2% of 2011 Census) in **England** between **24 January and 20 November 2020** for people aged 30 to 100 years. The **risk of death for more disabled men and women**, respectively, was **3.1 and 3.5 times greater** than compared to **less disabled men and women**. The risk of death for **less disabled men and women**, respectively, was **1.9 and 2.0 times greater** than compared to **non-disabled men and women**. After statistical adjustment, **no single factor could explain the considerable raised risk of death** and place of residence, socio-economic and geographical circumstances, and pre-existing health conditions all play a part. The report noted that an important part of the raised risk is because **disabled people are disproportionately exposed to a range of generally disadvantageous circumstances compared with non-disabled people**. The report also noted that the proportion of people who reported to have a disability in the 2011 Census in Wales was notably higher than in England (22.7% vs. 17.6%, respectively).

## **Mortality - children and adults with impairments in cognition, language, motor and social abilities**

The case control study by **Baksh et al. (2021)** investigated the inequalities in COVID-19 outcomes following hospital admission for people with impairments in cognition, language, motor and social abilities (described and abbreviated here by the authors as intellectual disability, ID) compared to the general population. Between February 2020 and 9 July 2020, 506 people with ID admitted to acute care hospitals in the UK that had complete data on age group, sex and ethnicity were matched in 1:3 ratio to 1518 **general population controls**. The ID sample consisted predominantly of adults over the age of 40 (75%; 7.7%, n=39 were <20 years of age), were mostly male (56.5%) and white ethnicity (86.6%). **People with ID had a 56% increased relative risk of dying from COVID-19 after they were hospitalised** compared with controls, with a **mortality rate of 29.2% for the ID group compared with 18.8% for controls**. Adjusted for age group, sex, known mortality-related comorbidities, severity of illness on admission, interventions and Down syndrome diagnosis, **the association between mortality and an ID diagnosis remained significant**. Viral pneumonia was significantly associated with mortality in the ID group. This complication increased ID patients' risk of dying by 174%. After 5 days in hospital, 16.6% of ID patients had died compared with only 6.5% of controls. This trend continued so that at 20 days 39.3% of ID patients had died compared with 32.7% of controls.

## **Mortality - children and adults with lower intellectual ability (usually IQ<70) and impaired social and adaptive functioning**

**Williamson et al. (2021)** published a large cohort study, using English electronic GP records to investigate **the risk of hospitalization with, and death from COVID-19 among adults and children with lower intellectual ability (usually IQ<70) and impaired social and adaptive functioning compared to those not on the learning disability register**. They identified more than 90,000 adults and over 9,000 children with registered learning impairments as well as adults and children with Down's syndrome and cerebral palsy for inclusion. Among **adults with learning impairments** there were **increased risks of**

**COVID-related hospitalization and death** across **two waves** of the pandemic (March-August 2020 and September 2020-February 2021) (Hazard ratios (HR) of 5.3 for admission and **8.2 for death in wave 1**). **Down's syndrome** (HR 10.6 for hospitalization, 36.3 for COVID-related death) and **cerebral palsy** (HR 5.0 for hospitalization and 5.8 for death) were also associated with **increased risk**. Patterns were similar in wave 2. Risks were higher among those with severe to profound learning impairment although the absolute number of deaths was higher in the group with mild to moderate learning impairment. **Children with learning impairment** were also at **increased risk of hospitalization with COVID-19** (HR 6.2 in wave 1) but numbers of **deaths were too small to calculate risk of death**. The **large number of participants** is a significant **strength** of the study, but the **reliance on coding of learning impairment** in GP records means the sample may not be fully representative.

### **Hearing performance and communication - adults**

**Abrar et al. (2021)** explored the impact of the COVID-19 pandemic on postponement of **elective surgical procedures** for profoundly **deaf patients** awaiting **cochlear implantation**. **All adult** participants (n=23) were selected from Richard Ramsden Centre for Auditory Implants, Manchester Royal Infirmary, Manchester. The study comprised of an open-ended written questionnaire. Their ages ranged from 18 to 89 years, with a median age of 69 years. Generally, the study process was described in detail. A potential bias was that patients from a lower socioeconomic status may not have **access** to the internet and elderly patients may not be comfortable using **online forms** of communication. In addition, the study was carried out in a single centre with a small number of participants and data collection periods were not included. **Communication** was a barrier and 65% reported experiencing **difficulty** with **communication** and **hearing**, either via **telephone or virtual communication** modalities, related to wearing of **facemasks**. The most commonly reported struggle was with the use of **telephones** (43%) and facemasks (43%) as patients struggled to lip-read behind the **facemasks**. Increased **isolation** with shielding and not being able to communicate with family over the telephone and **not being able to have a face-to-face appointment** with the doctor was a struggle. Only one participant reported in favour of technology, stating they were still able to “talk and see my friends” and continue with their education. However, others felt university education provided online ‘reduced opportunities to lip-read’ making life more **difficult** for them. Coping strategies included **walking, gardening, exotic cooking, reading and online scrabble**.

**Naylor et al. (2020)** aimed to explore the perceived effects of **social distancing restrictions and safety measures** on people with **hearing loss**. They issued, between **29 May and 15 June 2020**, a 24-item 5-point Likert Scale survey to **adult participants** with a hearing loss recruited via Hearing Sciences – Scottish Section of the University of Nottingham (Glasgow). Of 308 potential participants, 129 responded. The majority had mild hearing loss, 59% (n=76), their ages ranged from 27 to 76 years (mean 64.4) and 51.9% (n=67) were male. Participants were grouped according to a self-reported unaided hearing ability in answer to the question ‘How is your hearing (when not wearing hearing aids?)’ with possible answers: very good, good, middling, poor or very poor; better 53% (n=68) and worse 47% (n=61). There were some **concerns with the study methodology** with regard to reporting of demographic details and the contribution of confounding factors to the findings. Regarding **hearing performance and communication**, both groups found

**difficulty** in understanding people (hearing and lip reading) when **face masks** were worn. The use of **video calls** was found to be slightly worse than 'being in the room' for those in the 'worse hearing' group compared to the 'better hearing' group. However, TV and radio COVID-19 updates were easy to follow for most respondents. There was no clear consensus as to whether hearing performance was worse in video calls compared to phone calls. Also, there was a spread of responses with regard to hearing performance and communicating with people at a safe distance. The use of video subtitles could not be determined as most people marked 'not applicable'. The authors indicated that participants may not have known about this feature.

### **Physical health – children with additional support needs and disabilities**

**Couper-Kenney & Riddell (2021)** examined child health outcomes during the pandemic (**June to July 2020**) for those with additional support needs and disabilities (ASND) along with other outcomes (to do with education) in a discussion about children's rights during the pandemic. They discussed literature as well as policy and legislation to frame the research presented. Sixteen mothers of children with ASND (n=24) were interviewed. Not enough details are provided in the methods section to assess recruitment bias, reliability of the results or ethical standards of the study. There were negative impacts on **children's physical health** in the form of family members taking on **physical caring roles** due to shielding and suspension of care support.

### **2.2.3 Mental health:**

#### **Children (and their families)**

**Asbury et al. (2021)** examined the impact of the COVID-19 pandemic on the mental health of families with children with special educational needs and disabilities (SENDs) during the **first two weeks of school closures**. Parents and carers (n=241; majority mothers) reported on their own and their children's **mental health**. While the analysis process was described in detail, more details of the methods are needed to be able to assess potential biases of the study. **Worry (i.e., anxiety and fear;** by parent and child, about self and others as well as generally) was reported by a large number of participants. **Loss** (of routine, support and specialist input) and **changes in mood and behaviour** (low mood, distress and challenging behaviour) were also reported. Some difficulties were suggested (with examples) to be specific to families of children with special educational needs or disabilities (SENDs) and thus negative impacts were likely amplified for this population. However, as the authors point out, there was no comparator group of families with neurotypical children. How much a child was able to understand why the changes had happened impacted upon **distress and challenging behaviour**. For a small number of participants, **minimal or positive impacts** of the pandemic were reported, with positive impacts particularly reported by those whose children felt safest at home.

**Bailey et al. (2021)** used an ongoing UK cohort study of over 1000 families to investigate **changes in the mental health of children with learning impairment** by comparing the responses given by parents completing a survey using items including the Strengths and Difficulties questionnaire either **pre-lockdown** (2019-early 2020, **294** participants) or **post-lockdown** (April- July 2020, **103** participants). Responses were compared to those taken at



baseline 2.5 years earlier. There was **no difference** in the amount of change seen in either child behaviour or emotional problems between the pre and post lockdown response groups. The authors reflected that the group level data may mask significant individual variability. The **timing** of the questionnaire may also mean that the **full impacts of lockdown had not yet been experienced**.

**Couper-Kenney & Riddell (2021)** examined child health outcomes during the pandemic (**June to July 2020**) for those with ASND along with other outcomes (to do with education) in a discussion about children's rights during the pandemic. They discussed literature as well as policy and legislation to frame the research presented. Sixteen mothers of children with ASND (n=24) were interviewed. Not enough details are provided in the methods section to assess recruitment bias, reliability of the results or ethical standards of the study. Mental health **of children** with ASND was poorer due to COVID-19 itself as well as school-related factors (e.g., school work, missing peers and activities). The abrupt closure of schools caused anxiety. The impact of learning from home varied, but many older children struggled with anxiety and for some, it was **difficult to access** their usual **mental health support**. However, there were also **positive mental health impacts** (happier, keen to learn) due to the lack of school-related stress. Links between **physical and mental health** were also noted (e.g., eating habits changing due to anxiety).

**Greenway and Eaton-Thomas (2020)** used a questionnaire (open- and closed-ended questions; collected in **June and July 2020**) to explore the experiences of 238 parents home-schooling their children with SENDs in the pandemic. The impact of home-schooling on children was explored and included mental health. The sample was self-selected, thus might be biased; the authors note that the sample might be biased particularly against parents of children with more severe SENDs. It is also unclear how representative the sample was of the target population. Questions in the survey were adapted from those previously used, but it is unclear if these had been validated. The mental health impacts for their children and families more broadly were also noted in the data. These included concerns about **lack of social interaction** and about **re-integrating to school** and the impact this would have on their **children's mental health**. In contrast, some reported the positive impact on home-schooling had on their child in term of **performance and less stress**. The majority of the sample felt they had not received enough **support for their child's psychological needs**.

**Paulauskaite et al. (2021)** used survey questions in **May to July 2020** to understand the experience of the pandemic on 88 families of very young children (pre-school) with moderate to severe development delays and challenging behaviours. Closed-ended and multiple-choice questions were used to ask about pandemic experiences (well-being, challenges and access to services/support) and an open-ended question was asked about concerns of long-term impacts. There was a lack of detail about the children's characteristics. It is unclear how representative the sample was of the target population and the authors note a lack of representation from Black, Asian and Minority Ethnic groups. Participants reported having to manage **additional mental health needs that their child** had (88%).

**Theis et al. (2021)** report the results of a **survey** of 122 English **parents and carers of children** and **young adults** with **physical** (33.6%) **and/or learning** (76%) impairments which focused on physical activity opportunities and mental health, distributed in June-July 2020. Demographic data on the sample is limited (no data on socio-economic status or ethnicity) and stated response rate was approximately 30%, making **representativeness of**

**the sample uncertain. Over 90%** of respondents reported a **decline** in their **child's mental health** during lockdown, with the greatest reported impact being a trend towards negative behaviour. For the items related to overall mood, relationships and behaviour, maintaining previous friendships and overall independence, 32% rated these 'much worse' during lockdown and 42% 'a bit worse'.

Using a mixed method approach (online survey and semi-structured interviews, collected in mid-July 2020), **Wolstencroft et al. (2021)** examined the pandemic experiences of 23 families with children (aged 5 to 15 years) with significant limitations in cognitive and adaptive skills reported by mothers. More details of recruitment and the sample are needed in order to assess potential biases in the study. The authors note that the sample was mostly white mothers who were co-parenting and that experiences likely differ for non-white, non-female, single parents. Whilst children were worried about becoming infected (65%), they were more worried about friends and relatives getting COVID-19. The majority of children (87%) found leaving the home **stressful**, but **positive changes** in their lives were also reported (74%). A number reported their children were happy in the safety of their own home with their own routines, **mental health** sometimes improving. For some however, **life and social skills** had regressed because of social isolation. A **positive impact on children's (and parents') wellbeing** was felt by a slower approach to life. Managing their child's increase in behavioural and mental health problems was a challenge, particularly with fewer resources available.

## **Adults**

**Abrar et al. (2021)** explored the impact of COVID-19 pandemic on postponement of **elective surgical procedures** for profoundly **deaf patients** awaiting **cochlear implantation**. **All adult** participants (n=23) were selected from Richard Ramsden Centre for Auditory Implants, Manchester Royal Infirmary, Manchester. The study comprised of an open-ended written questionnaire. Their ages ranged from 18 to 89 years, with a median age of 69 years. Generally, the study process was described in detail. A potential bias that patients from a lower socioeconomic status may not have **access** to the internet and elderly patients may not be comfortable using **online forms** of communication. In addition, the study was carried out in a single centre with a small number of participants. The majority of participants, 65%, conveyed statements pertaining to a largely negative impact of the postponement of **cochlear implantation surgery** and the COVID-19 pandemic on their **mental health**. Overall, 91 per cent described the negative impact on their general **daily life** and **mental health**. **Disappointment** was the most common emotional reaction expressed by 70% of the study participants. Coping strategies included **walking, gardening, exotic cooking, reading and online scrabble**.

**Naylor et al. (2020)** aimed to explore the perceived effects of **social distancing restrictions and safety measures** on people with **hearing loss**. They issued, between **29 May and 15 June 2020**, a 24-item 5-point Likert Scale survey to **adult participants** with a hearing loss recruited via Hearing Sciences – Scottish Section of the University of Nottingham (Glasgow). Of 308 potential participants, 129 responded. The majority had mild hearing loss, 59% (n=76), their ages ranged from 27 to 76 years (mean 64.4) and 51.9% (n=67) were male. Participants were grouped according to a self-reported unaided hearing ability in answer to the question 'How is your hearing (when not wearing hearing aids?)' with

possible answers: very good, good, middling, poor or very poor; better 53% (n=68) and worse 47% (n=61). There were some **concerns with the study methodology** with regard to reporting of demographic details and the contribution of confounding factors to the findings. There were a range of **negative outcomes** that included worry and increased anxiety about **communication** with people wearing **face masks** and in particular with regard to going to public places or for health appointments. Also, participants reported feeling **stressed** or worried about **video calls** and if hearing aids stopped working or they couldn't get batteries. There were some **positive outcomes**, some participants reported enjoying quieter outdoor environments and relief at not having to attend social gatherings. There was no clear consensus as to enjoyment of video calls but those in the 'worse hearing' group tended to enjoy them less.

**Patel et al. (2021)** aimed to examine the recent experiences of **lockdown** circumstances of the **parents of adults with learning impairment**. Interviews took place by telephone (n = 7) or via video conferencing (n = 1) in **June and early July 2020**. The age of the adult with learning impairment ranged between 18 and 43 years (mean = 31). The parents ages ranged from 44 to 82 years (mean = 66) living in the UK. More details of the methods are needed to be able to assess potential biases of the study. The authors report that the study was based among relatively affluent group however, socially, and economically disadvantaged groups may not have **access** to the **internet** and would provide additional information. Parents reported that there had been **both positive and negative impacts** on their son's/daughter's well-being. A **lack of understanding regarding COVID-19 and need for restrictions** was said to have **heightened the anxiety for some individuals**.

**Stephoe et al. (2021)** undertook a **case-control study** nested within the English Longitudinal Study of Ageing (ELSA), with data collection in **June-July 2020**. The case control study included 4887 participants of age 50 years or over, including some younger spouses/partners, and compared mental health outcomes between people with physical impairments (cases) versus people without physical impairments (controls). **People with physical impairment had significantly poorer outcomes in terms of depression, anxiety, loneliness, poor sleep and weekly family contact** (all  $p < 0.0001$ ). **People with physical impairment also had poorer outcomes for life satisfaction, purpose in life** (defined by Office for National Statistics measures) **and for quality of life** assessed by the CASP-12 instrument (all  $p < 0.0001$ ). The outcomes were very similar when physical impairment was defined by impaired activities of daily living and when defined by impaired mobility.

## **Children and adults**

**Kavanagh et al. (2021)** conducted a **cross-sectional survey** to understand the health and health care experiences of disabled people compared to non-disabled people during the early stages of the COVID-19 pandemic in the UK. They collected interview/survey data in **April-May 2020** using population based cluster sampling based on a national database of postcode addresses, as part of the longitudinal 'Understanding Society' survey. The sample comprised 12,703 adults of age 16-64 years, of which 17.4% reported a disability. Disabled people tended to be older, female and of white UK ethnicity compared to non-disabled people. **Disabled people were significantly more likely to report distress**, relative risk

1.15 (95% CI 1.05, 1.26), **and loneliness**, relative risk 1.75 (95% CI 1.46, 2.09), compared to non-disabled people.

**Shakespeare et al. (2021)** used interviews, between **June and August 2020**, with 69 disabled people (including carers of disabled children) and with 28 informants from infrastructure organisations (details lacking) to explore the impact of the pandemic on disabled people in England and Scotland. The authors note that there were few people from Black and Ethnic minority groups and from care homes, thus limiting the conclusions for these groups. Additional detail in the methods is needed, in particular of the data collection and sample of key informants from organisations. The authors report that **disruption** may be felt by all, but amplified for disabled people with regards to specific issues. **Change in health care and support** (e.g. cancelled therapies and appointments, lack of provision and servicing of assistive products) gave rise to **concerns about negative impacts on health and development** especially of particular groups such as children and those with dementia. Mental health **and wellbeing** (e.g. anxiety, loss of confidence) was affected by suspension of social care, reduction of social bonds (especially for those with learning impairments) and increased reliance on family/informal carers. Third sector organisations filled the gaps in social care, having a positive impact upon **mental health and wellbeing**, including sourcing PPE.

## 2.3 Bottom line summary

### Evidence overview:

- 19 studies included of UK populations, none of the studies were exclusively of Welsh populations
- 10 studies of quantitative design, 5 qualitative and 4 mixed methods; 7 made comparisons with either pre-pandemic data or outcomes for non-disabled people
- 3 studies made pre-pandemic comparisons and the majority (n=16) included data from 'wave 1'
- All of the studies had some weaknesses either in the way they were conducted or in the reporting of their methods, however 2 quantitative studies used large patient level data sets to investigate COVID-19 related mortality
- 8 studies investigated adult outcomes and 7 child outcomes; only 3 of the 19 studies considered outcomes for disabled people as a whole group while the others looked at the outcomes for people with specific impairments

### Evidence findings:

#### Access to healthcare

- 7 studies looked at access to healthcare outcomes, 2 for child populations, 3 for adult populations and 2 for both children and adults; the outcomes for children used parent reported outcomes
- 4 studies were quantitative and 3 were mixed methods

- 3 studies looked **generally at access to services**, with 2 of these studies involving children with developmental delays or learning and developmental impairments. **All 3 studies reported concerns or issues with accessing services.** With one study reporting that **disabled people were over twice as likely to report waiting for a health intervention during the first wave of the COVID-19 pandemic compared to non-disabled people** and disabled people were **substantially more likely to report needing to access various services than non-disabled people.**
- The other 4 studies reported on experiences across a **range of specific services.** **Issues** in access to audiology and optometry and ophthalmology were noted and there was an **increased need for mental health services.**
- There were some positive reports for **telehealth**, but this was not universal and individual needs have to be carefully considered.

### Health Outcomes (not mental health)

- 7 studies looked at health outcomes, one for a child population, 3 for adult populations and 3 for both children and adults; the outcomes for children used parent reported outcomes
- 5 studies were quantitative and 2 were qualitative
- 2 studies looked at COVID-19 outcomes and 3 studies, using different data sets and with different populations, investigated COVID-19 mortality rates; other outcomes that were explored included hearing performance and communication, and physical health of children with ASND
- All 3 studies exploring **mortality rates** between disabled people and non-disabled people reported considerable inequalities in the mortality rates for disabled people. Notably, the ONS (2021), who looked at disabled people as a whole group using disability status as recorded on the 2011 Census, found the risk of death involving COVID-19 was **3.1 times greater for more-disabled men** and **1.9 times greater for less-disabled men**, compared with non-disabled men; among women, the risk of death was **3.5 times greater for more disabled women** and **2.0 times greater for less-disabled women**, compared with non-disabled women.
- For the 2 studies looking at experiences of deaf people, the use of **facemasks** and the **lack of face-to face appointments or replacement with other means** had an **impact on people being able to hear and communicate.** It was clear that individual experiences varied.

### Mental health

- 13 studies considered the mental health impacts of COVID-19 on disabled people; 7 for child populations, 4 for adult populations and 2 for children and adults; the outcomes for children used parent reported outcomes
- 5 studies were quantitative, 5 were qualitative and 3 were mixed methods
- There were a **range of negative impacts** on mental health for both **adults and children**, although one study looking at the impacts **on children with a learning impairment** found **no difference** between **pre and post lockdown periods**; there

were also **some reports of improvements in mental health** such as for children who felt safer at home or had school related stress. Adults with a hearing loss reported enjoying quieter outdoor environments and relief at not having to attend social gatherings. One study noted that **Third sector organisations** had a **positive impact** upon **mental health and wellbeing** by filling gaps in social care. It was clear that individual experiences varied.

## 7. DISCUSSION

### 3.1 Summary of the findings

From 19 studies investigating the impact of COVID-19 on the health of disabled people, there is evidence that there have been **many negative outcomes and experiences with regards to access to healthcare, health outcomes and mental health**. The **most striking and serious outcome is the increased mortality rates involving COVID-19 for disabled people compared to non-disabled people**. For the rates reported in Office for National Statistics (2021), statistical methods could not identify a single factor to explain the considerably raised risk of death. The ONS report stated that place of residence, socio-economic and geographical circumstances, and pre-existing health conditions all contributed. Thus indicating that **disabled people are disadvantaged across a range of circumstances**.

**Experience and access to remote services varied**, thus indicating that disabled people need to be consulted with regard to the delivery of the services that they require.

There were **some reports of improvements in mental health**, again indicating that individual needs should be considered going forward.

### 3.2 Limitations of the available evidence

**No studies were identified concerning COVID-19 vaccination status** of disabled people although this could be due to the timing of publication and the search strategy for this review. **None of the studies were exclusively of Welsh populations**; this means that many of the findings from the included evidence might not be generalisable to Welsh populations. This is important when considering that the **proportion of people who reported having a disability in the 2011 Census in Wales was notably higher than in England** (22.7% vs. 17.6%, respectively). The majority of the studies were conducted either during or encompassing the 'first wave' of the COVID-19 pandemic, March 2020 to June 2020. Only two studies collected data from the 'second wave'. Therefore, the findings may not be relevant to the current impacts on and experiences of disabled people, particularly in considering the roll-out of the COVID-19 vaccination programme.

### 3.3 Implications for policy and practice

Although there is evidence that there have been many negative outcomes and experiences with regards to access to healthcare, health outcomes and mental health at the point in time in which the data was collected, it cannot be determined if those have improved or worsened over time with the roll-out of the COVID-19 vaccination programme and the movement of the UK administrations into and out of different phases of lockdowns and restrictions. Also, consideration needs to be given to the recovery plans for patient services and how these will address the needs of disabled people.

Telehealth should not be seen as the panacea for the healthcare of disabled people; it is clear from the included studies that people had varying experiences and access to

technology. Therefore, consideration needs to be given to the individual and their specific needs.

### **3.4 Strengths and limitations of this Rapid Review**

Although this review was conducted rapidly to inform policy and decision makers, comprehensive search strategies were designed to identify relevant evidence in the bibliographic databases. Database searches were supplemented by searching a range of relevant websites known to Stakeholders.

However, it should be noted that there was a lack of time to carry out searches in social care databases. In conducting the searches, although a range of search terms were used, they were not exhaustive in covering the wide range of disabilities that exist, such as terms for cancer or arthritis. Therefore, this review is likely to have missed important groups of disabled people.

This rapid review includes evidence from quantitative, qualitative, and mixed methods studies. However, other than grouping the studies together according to the health domain indicator they explored and then by child or adult populations, there was too much variation in populations and outcomes for any collective synthesis.

The rapid review focused on peer-reviewed publications; this potentially results in publication bias by not considering studies from the 'grey literature' i.e. reports published outside of traditional commercial publishing<sup>3</sup>. However, grey literature was identified in the prior rapid scoping review, this was reviewed for inclusion in the review with consideration given to well-conducted and reported studies exploring outcomes not captured by the included peer-reviewed publications.

In conducting this review rapidly, data extraction, critical appraisal and summaries of findings of each study were undertaken by different reviewers and not independently in duplicate for data extraction or quality appraisal or checked for accuracy and consistency.

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<sup>3</sup> Lefebvre C, Glanville J, Briscoe S, Littlewood A, Marshall C, Metzendorf M-I, Noel-Storr A, Rader T, Shokraneh F, Thomas J, Wieland LS. Chapter 4: Searching for and selecting studies. In: Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). *Cochrane Handbook for Systematic Reviews of Interventions* version 6.2 (updated February 2021). Cochrane, 2021. Available at: <https://training.cochrane.org/handbook/current/chapter-04> [Accessed: 17 February 2022].



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## 9. RAPID REVIEW METHODS

### 5.1 Eligibility criteria

Table 2: Eligibility criteria for included evidence

	Inclusion criteria	Exclusion criteria
<b>Population</b>	<p>Disabled children and adults</p> <p>Due to need for this to be a rapid review not all disabled populations have been included. The search strategies were not exhaustive to include all specific impairments. The search terms included some limited specific terms such as for sensory impairments but not for conditions such as cancer and arthritis.</p>	<p>Specific conditions other than sensory impairments and learning impairments</p>
<b>Concept</b>	<p><u>Equality and Human Rights Commission life domain:</u></p> <ul style="list-style-type: none"> <li>health</li> </ul> <p>Parent or carer reported where relevant are acceptable.</p>	<p>Outcomes or experiences of carers</p> <p>Other EHRC life domains identified via the rapid scoping review (education, work, living standards, justice and personal security, participation)</p>
<b>Context</b>	<p>COVID-19 Pandemic</p>	<p>Other communicable diseases or any non-communicable disease</p>
<b>Study design</b>	<p>Primary research studies (must have method details).</p>	<p>Editorials, blogs, news items, commentaries, opinion pieces not evidence based.</p> <p>Evidence-based guidelines, systematic and rapid reviews.</p>
<b>Countries</b>	<p>UK</p>	
<b>Language of publication</b>	<p>English</p>	
<b>Publication date</b>	<p>2019 and later</p>	
<b>Publication type</b>	<p>Peer reviewed studies and relevant grey literature reporting outcomes not captured elsewhere.</p>	
<b>Other factors</b> <i>Any other key points to note</i>	<p>The review will be guided by the social model of disability set out by Disability Wales as follows:</p> <p>“The Social Model of Disability makes the important difference between ‘impairment’ and ‘disability’.</p> <p>The Social Model has been worked out by disabled people themselves. Our experiences have shown us that in reality most of the problems we face are caused by the way society is organised.</p> <p>Our impairments or bodies are not the problem. Social barriers are the main cause of our problems.</p> <p>The barriers include people attitudes to disability, and physical and organisational barriers</p>	

## 5.2 Literature search

This rapid review is an extension of a previously completed rapid scoping review, which has been published separately as a WCEC Rapid Evidence Map (Impact of the COVID-19 pandemic on disabled children and adults across the Equality and Human Rights Commission life domains: a rapid evidence map, report number – REM December 2021 ([http://www.primecentre.wales/resources/REM00025\\_Wales\\_COVID-19\\_Evidence\\_Centre\\_Rapid\\_Evidence\\_Map\\_of\\_health\\_effects\\_of\\_COVID\\_on\\_disabled\\_March\\_2022.pdf](http://www.primecentre.wales/resources/REM00025_Wales_COVID-19_Evidence_Centre_Rapid_Evidence_Map_of_health_effects_of_COVID_on_disabled_March_2022.pdf))). The searches for the WCEC Rapid Evidence Map were conducted according to a priori protocol. The search strategy aimed to find both published and unpublished literature from a wide-ranging set of resources. The included literature known to the reviewers (e.g., identified during a prior rapid evidence summary) was also checked for eligibility and included or used as a source of specific relevant evidence. Included studies identified via the WCEC Rapid Evidence Map included outcomes from all 6 Equality and Human Rights Commission life domains (education, work, living standards, health, justice and personal security, participation). The Stakeholder group representing the Equality, Inclusion and Human Rights Branch of Welsh Government selected the 'Health' outcomes as the focus of this rapid review.

As this is a continuation of the WCEC Rapid Evidence Map, no additional searching was undertaken in the preparation of this rapid review. All the database and grey literature searching details from the WCEC Rapid Evidence Map can be found in Appendix 1.

## 5.3 Study selection process

The study selection process was informed by the Stakeholder group who instructed that the rapid review should consist of peer reviewed studies that were identified via the databases search and reported a health outcome.

Of the 68 included studies that were identified by the WCEC Rapid Evidence Map, there were 56 that reported health indicators/outcomes. These were screened by a single reviewer to identify the peer reviewed studies and relevant grey literature reporting outcomes not captured elsewhere. 19 studies met the inclusion criteria and were selected for data extraction and critical appraisal. This comprised of 18 studies found via the database searches and 1 study via grey literature searching (deemed as relevant for inclusion due to the study design and the reported quality assessment).

## 5.4 Data extraction

Data were extracted from studies and reports into a Word form to capture key information such as participants, study design, data collection dates, key findings of health indicators and comments on study methodology. Data extraction was carried out by individual reviewers.

## 5.5 Quality appraisal

Critical appraisal of the 19 included studies was completed to assess the trustworthiness, relevance and results reported. It was completed by a single reviewer using one of the following validated critical appraisal tools:

- The JBI Checklist for Prevalence Studies – <https://jbi.global/critical-appraisal-tools>
- The Mixed Methods Appraisal Tool – <http://mixedmethodsappraisaltoolpublic.pbworks.com/w/page/24607821/FrontPage>
- The CASP Qualitative Studies Checklist - <https://casp-uk.net/casp-tools-checklists/>

## 5.6 Synthesis

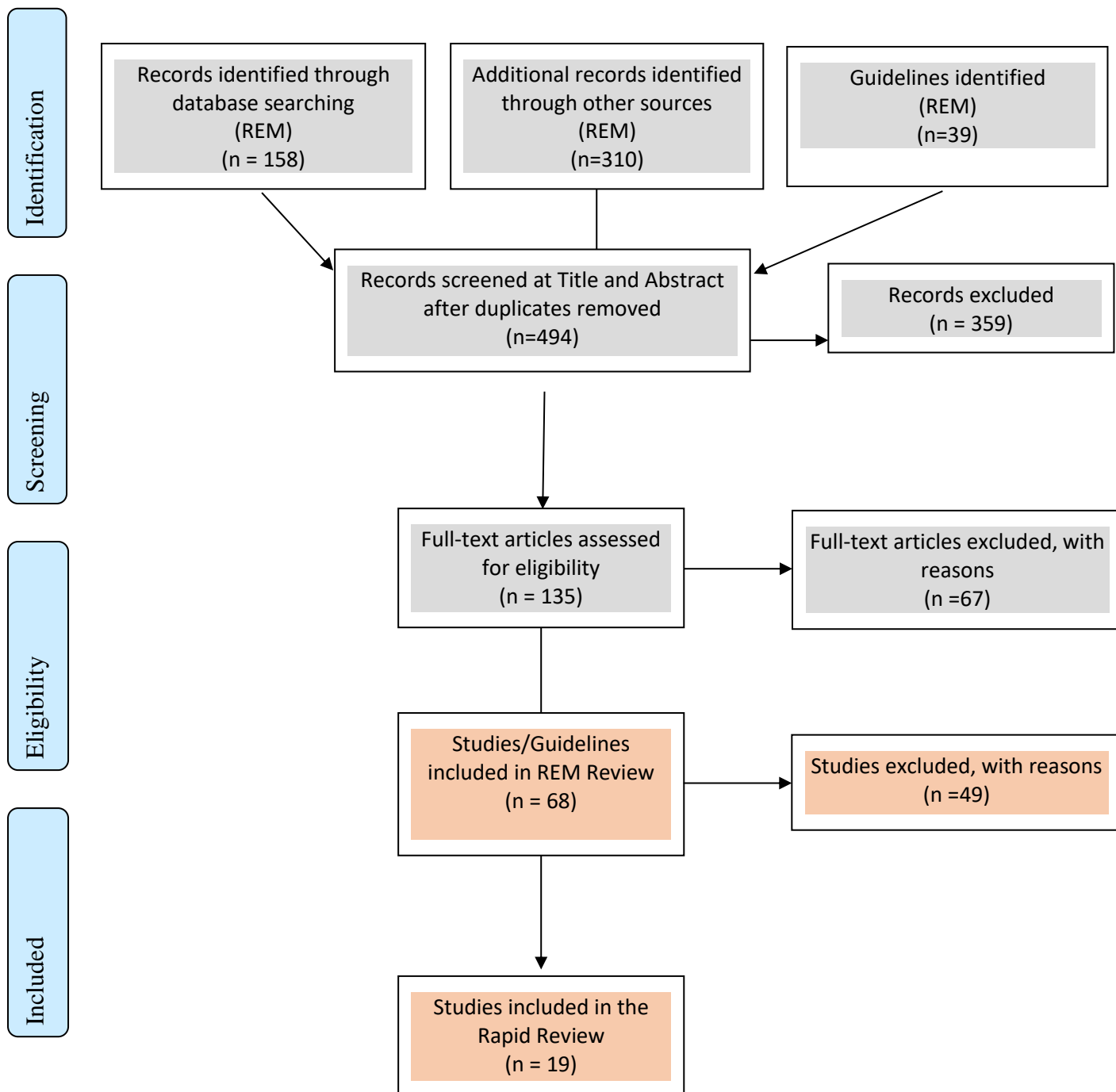
A narrative approach was used, including tables detailing the extracted data (authors (year), country, title, study details, population and settings, key findings and observations/notes), to provide descriptive summaries of the selected studies to the reader. This type of analysis is recommended for rapid reviews (Grant & Booth 2009<sup>4</sup>).

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<sup>4</sup> Grant MJ, & Booth A, (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal* 26: 91–108. doi: <https://doi.org/10.1111/j.1471-1842.2009.00848.x>

## 10. EVIDENCE

### 6.1 Study selection flow chart



Grey boxes illustrate searching and study selection completed for the rapid evidence map (REM) (Impact of the COVID-19 pandemic on disabled children and adults across the Equality and Human Rights Commission life domains: a rapid evidence map – RES00025); Orange boxes detail the additional screening results for this rapid review.

## 6.2 Summary of evidence (Table 3)

Citation	Study Details	Participants & Location	Key findings	Notes
<p><b>Abrar et al. (2021)</b>  <u>Impact on patients of the coronavirus disease 2019 pandemic and postponement of cochlear implant surgery: a qualitative study</u>                      The Journal of laryngology and otology 135(10), pp. 918-925. doi: 10.1017/S002221512100219X</p>	<p><b>Study Design:</b> Qualitative survey</p> <p><b>Data collection dates:</b> Not reported.</p>	<p><b>Participants:</b> All adult patients scheduled for elective cochlear implant surgery who had their cochlear implantation surgery postponed because of the COVID-19 healthcare response. Equal numbers of male and female responders, and patient ages ranged from 18 to 89 years, with a median age of 69 years.</p> <p><b>Sample size:</b> n=38 but n=23 patients responded.</p> <p><b>Location:</b> Richard Ramsden Centre for Auditory Implants, Manchester Royal Infirmary, Manchester University NHS Foundation Trust, UK.</p>	<p><b>Mental health</b></p> <p>65% of patients who had their cochlear implantation surgery postponed because of the COVID-19 pandemic described an overall negative impact on their mental health.</p> <p>Participants expressed a primarily negative impact on wellbeing from the surgery delay, expressing feelings of isolation or loneliness.</p> <ul style="list-style-type: none"> <li>• elderly participants: Low mood, depression, or hopelessness</li> <li>• young adults: frustration and anxiety</li> </ul> <p>Participants described a negative impact on their general daily life, describing difficulties communicating with facemasks and struggles with reliance on telephone communication because of social distancing.</p> <p><b>Theme 1: immediate patient reactions</b></p> <p>N=16 expressed primarily negative emotional reactions to the postponement of their surgery.</p> <p>N=4 patients were categorised as expressing an overall neutral emotional reaction.</p> <p>N=3 were found to have mixed positive and negative emotional reactions, and no participants expressed a predominantly positive reaction to the postponement of their surgery.</p> <p><b>Theme 2: impact on mental health</b></p> <p>N=15 patients expressed statements pertaining to a predominantly negative impact of the postponement of cochlear implantation surgery and the COVID-19.</p> <p>N=2 patients described a primarily positive overall impact.</p>	<p>Clear aims and appropriate methods used.</p> <p>Data seems to have been collected and analysed appropriately. Themes clearly presented.</p> <p>The data collection period was limited to one month which meant that any hospitalised or unwell participants may not have had the opportunity to respond within this short time period.</p> <p>Relationship between researcher and participants not discussed.</p> <p>Approaches/strategies are discussed to overcome issues faced.</p> <p>Selection bias as patients from a lower socioeconomic status and elderly may not have access to the internet.</p>

			<p>N=4 patients expressed statements that were interpreted as neutral or having no significant mental health impact.</p> <p>N=2 responses were deemed inconclusive as they contained insufficient information to enable accurate interpretation of the impact on their mental health.</p> <p><b>Theme 3: impact on general daily life</b></p> <p>Overall, 91 per cent (21 of 23 patients) of study participants described some form of negative impact on their general daily life because of postponement of cochlear implantation surgery and the COVID-19 pandemic.</p> <p><b>Theme 4: coping strategies and philosophical reflections</b></p> <p>N=9 described finding new hobbies or developing old ones as coping strategies.</p>	
<p><b>Asbury et al. (2021)</b>  <u>How is COVID-19 Affecting the Mental Health of Children with Special Educational Needs and Disabilities and Their Families?</u>  Journal of autism and developmental disorders 51(5), pp. 1772-1780.</p>	<p><b>Study Design:</b>  Qualitative survey</p> <p><b>Data collection dates:</b> 22<sup>nd</sup> March to 1<sup>st</sup> April 2020</p>	<p><b>Participants:</b> Parents or carers of school-aged children with SEND.</p> <p>Parents/carers: 92% mothers; 63% had pre-tax household income of less than £40,000.</p> <p>Children: mean age 9 years, range 5 to 18 years; 71% boys; 88% White British (6% mixed, 3% Asian, 2% White non-British, 1% other); 44% in mainstream schools; 70% had an EHCP; 71% had a school place made available, but only 8% had taken it up.</p> <p>Parent/carer reported SENDs: Autism Spectrum Conditions 197 (82%); Attention Deficit Hyperactivity Disorder 56 (23%); Attention Deficit Disorder 15 (6%); Developmental Coordination Disorder 24 (10%); Developmental Language Disorder 45 (19%); Dyslexia 21 (9%); Global Developmental Delay 12 (5%); Physical Impairment 14 (6%); Speech Disorder or Impediment 29 (12%); Social, Emotional, and Mental Health Difficulties 76 (32%); Sensory</p>	<p><b>Mental health</b></p> <p>COVID-19 affected mental health, with increased anxiety and fear being reported for a large proportion of families. Increased distress, low mood and stress were reported with lower frequency.</p> <p>More parents experienced anxiety and stress than children*. Fear, distress and low mood similar frequency of reporting.</p> <p>Categories of the impact on children's mental health:</p> <ul style="list-style-type: none"> <li>• Worry (anxiety and fear) <ul style="list-style-type: none"> <li>○ Worry for self</li> <li>○ Worry for others</li> <li>○ General worry</li> </ul> </li> <li>• Loss <ul style="list-style-type: none"> <li>○ Loss of routine</li> <li>○ Loss of support network and structures</li> <li>○ Loss of specialist input</li> </ul> </li> <li>• Moods, emotions and behaviour <ul style="list-style-type: none"> <li>○ Feeling down (including low mood and distress)</li> <li>○ Acting out</li> </ul> </li> </ul>	<p>Dates of data collection meant the impact of the first two weeks of school closure are captured.</p> <p>Clear aim and appropriate methods used, but more details of methods needed.</p> <p>No details on how data were collected, inclusion criteria, non-response, reason for choice of study design, researcher influence, consent process, reason for choice of quotes.</p>



<p>doi:10.1007/s10803-020-04577-2</p>		<p>Processing Disorder 11 (5%); Visual Impairments 12 (5%); Other 44 (18%).</p> <p><b>Sample size:</b> 241</p> <p><b>Location:</b> UK (95% England, 5% from Scotland and Wales).</p>	<ul style="list-style-type: none"> <li>○ Behaviour change</li> <li>• Knowing what is going on <ul style="list-style-type: none"> <li>○ Positive implications</li> <li>○ Negative implementations</li> </ul> </li> <li>• Overwhelmed <ul style="list-style-type: none"> <li>○ Stressed</li> </ul> </li> <li>• Minimal or positive impact <ul style="list-style-type: none"> <li>○ Positive emotions</li> <li>○ Minimal impact</li> </ul> </li> </ul> <p><b>Worry:</b> majority was specific to families of children with SENDs (extreme anxiety reactions characterised by known features of SENDs).</p> <p><b>Loss:</b> Some losses (e.g. support networks and routine) identified are likely across the whole population, but are amplified for these families due to the child having greater needs. Difficulty explaining losses to children with SENDs created more difficulties. Insufficient support for children within the first two weeks of school closure. The need to see familiar faces is likely amplified for children with some SENDs.</p> <p><b>Moods, emotions and behaviour:</b> Low mood and distress may be experienced more severely by families of children with SENDs. Types and destructiveness of challenging behaviour is likely uncommon in children without SENDs and is difficult for families to cope with and leads to distress.</p> <p><b>Knowing what is going on:</b> Child's level of understanding about why changes had happened impacted upon levels of distress; better understanding was associated with better outcomes. Disorientation of minimally verbal children sometimes resulted in challenging behaviour.</p> <p><b>Minimal or positive impact:</b> the impact of COVID-19 was not perceived as harmful for a substantial minority. For children who had a hard time at school and feel safest at home, the impact of the pandemic restrictions</p>	<p>Rigorous analysis process described. *More detail needed of how percentages of participants experiencing things were calculated.</p> <p>Detailed discussion of results and some suggestion for prioritised intervention.</p> <p>Authors note the limitation that no comparison was made with families with neurotypical children.</p>
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			may lead to calm respite and a more relaxed environment for them (and their families).	
<p><b>Bailey et al. (2021)</b>  <u>COVID-19 impact on psychological outcomes of parents, siblings and children with intellectual disability: longitudinal before and during lockdown design.</u>  <u>Journal of intellectual disability research</u> : JIDR 65(5), pp. 397-404.  doi:.10.1111/jir.12818</p>	<p><b>Study design:</b> cohort study</p> <p><b>Data collection dates:</b> Post-lockdown data collected April – July 2020, pre-lockdown data from 2019 into early 2020 (2.5 years after completion of an earlier study survey).</p>	<p><b>Participants:</b> Primary parental caregivers of children with a learning impairment aged between 5 and 16 completed a questionnaire as part of an ongoing cohort study.</p> <p>No further detail on types/level of impairment – reported elsewhere.</p> <p><b>Sample size:</b> 103 post-lockdown and 294 pre-lockdown (397 parents in total completed the survey).</p> <p>In the post-lockdown response group (71.8% children male, mean age 12.10 (range 7-17, 55% parents employed, 43.7% educated to degree level)).</p> <p>In the pre lockdown response group (66.7% male, mean age of child 11.36 (range 6-16), 49.7% parents employed, 54.8% parents educated to degree level).</p> <p><b>Location :</b> UK (online survey)</p>	<p><b>Mental health</b></p> <p>No difference in the amount of change seen in child behaviour and emotional problems between the groups that completed their follow-up survey pre-lockdown and during/immediately post-lockdown following multiple regression analyses which accounted for a number of relevant covariates.</p> <p>Authors state “findings suggest that the hypothesised almost universal negative impact may not be as straightforward as anticipated”.</p>	<p>Study uses a pre-existing survey which was already scheduled for distribution in a ‘naturalistic design’ which allows for comparison between pre and post pandemic respondents. Questions were not designed with COVID in mind.</p> <p>Only 35% provided data during/post-lockdown compared to pre-lockdown.</p> <p>Some differences shown in demographics between pre and post lockdown participants (table 1).</p> <p>Authors note that the survey timing may have been too early for the impacts of lockdown to fully affect families.</p> <p>Behavioral and emotional problems of the child were measured using the Strength and Difficulties Questionnaire parent report version. The adaptive skills of the child with learning impairment were</p>

				<p>measured using the 8-item GO4KIDDS Brief Adaptive scale with an additional item on augmentative communication.</p> <p>Co-variables examined included: parental age, employment and educational background; child with disability age, gender and adaptive skills; previous outcome scores for initial survey.</p> <p>Authors note lack of differences at a group level may be masking significant individual variability. They suggest some families may have had positive experiences as a result of lockdown – others may have had significant difficulties.</p>
<p><b>Baksh et al. (2021)</b>  <u>Understanding inequalities in COVID-19 outcomes following hospital admission for people</u></p>	<p><b>Study Design:</b> cohort study</p> <p><b>Data Collection Dates:</b> February 2020 and 9 July 2020</p>	<p><b>Participants:</b> Of 59,025 patients who were admitted between February 2020 and 9 July 2020 to acute care hospitals with a proven or high likelihood of SARS-CoV-2 infection: sample = 506 people with impairments in cognition, language, motor and social abilities with complete data on age group, sex and ethnicity, matched on 1:3 basis to 1518 general population controls.</p> <p>All patients were admitted to hospital at the discretion of their clinical team,</p>	<p><b>COVID symptoms</b></p> <p>Subjectively reported signs and symptoms such as loss of taste/smell, as well as those related to pain (headache, chest pain and muscle aches) were all reported less frequently in patients with impairments in cognition, language, motor and social abilities (or intellectual disability, ID). On the other hand, altered consciousness or confusion (29.9% vs 17.6%) and seizures (9.9% vs 2.2%) were more common in patients with ID. Compared with controls, ID patients were admitted with higher respiratory rates and were more likely to require oxygen therapy.</p>	<p>The study had ethical approval.</p> <p><b>Strengths:</b> The study benefits from data collection within a large, already established, cohort study large sample size and the use of a well-matched control group which allows for comparisons in symptoms, treatment and outcomes. Data</p>

<p>with intellectual disability compared to the general population: a matched cohort study in the UK. BMJ open, 11(10), p.e052482; doi: 10.1136/bmjopen-2021-052482UK</p>		<p><b>Sample size:</b> 2,024</p> <p><b>Location:</b> UK</p>	<p><b>Medical complications</b></p> <p>Medical complications were comparable between patients with ID and controls, with the exception of seizures which were more prevalent in the ID group (5.1% of those with ID compared with 2.0% of the control group).</p> <p><b>COVID related interventions</b></p> <p>Significantly fewer ID patients were admitted to ICU, underwent intubation, or received non-invasive respiratory support compared with controls. Adjusted for age group, sex, severity of illness on mission, number of comorbidities and Down syndrome diagnosis, patients with ID were 37% less likely to receive non-invasive respiratory support, 40% less likely to receive intubation and 50% less likely to be admitted to the ICU while in hospital.</p> <p><b>Mortality</b></p> <p>People with ID had a 56% increased risk of dying from COVID-19 after they were hospitalised compared with controls, with a mortality rate of 29.2% for the ID group compared with 18.8% for controls. Adjusted for age group, sex, known mortality-related comorbidities, severity of illness on admission, interventions and Down syndrome diagnosis, the association between mortality and an ID diagnosis remained significant. Viral pneumonia was significantly associated with mortality in the ID group. This complication increased ID patients' risk of dying by 174%.</p> <p><b>Survival analysis</b></p> <p>After 5 days in hospital, 16.6% of ID patients had died compared with only 6.5% of controls. This trend continued so that at 20 days 39.3% of ID patients had died compared with 32.7% of controls.</p> <p><b>Hospital stay</b></p>	<p>were collected UK-wide. Data were collected at the point and time of care. Mortality analysis was adjusted for chronic cardiac disease, chronic pulmonary disease, chronic kidney disease, liver disease, obesity, chronic neurological disorder, dementia and malignant neoplasms.</p> <p><b>Limitations:</b> details of how ID diagnosis was ascertained were not give. Missing data acknowledged, also grouping of variables e.g. 'chronic neurological disorder' loses detail. Due to the pandemic emergency situation patients were not involved in the design, conduct or reporting of the study. Limited staff resources at times of high COVID-19 infections may have led to missing data. Missing data were not imputed, and consequently complete data were not available for all variables.</p>
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			Controls spent a mean of 10.98 days in hospital (SD=14.45, median=6.5 days) while the ID group spent 14.55 days on average (SD=13.29, median=11 days).	
<p><b>Couper-Kenney &amp; Riddell (2021)</b> <u>The impact of COVID-19 on children with additional support needs and disabilities in Scotland.</u> European Journal of Special Needs Education 36(1), pp. 20-34. doi: 10.1080/08856257.2021.1872844</p>	<p><b>Study Design:</b> Qualitative interviews</p> <p><b>Data collection dates:</b> June to July 2020</p>	<p><b>Participants:</b> Mothers of children with ASND.</p> <p>24 of the 35 children in participating families had ASND. Eight of the children with ASND were at special schools or units and two were educated at home.</p> <p>Four families were shielding a child and one an adult. At least two families had adults who had had COVID-19.</p> <p>Most families were from more socially advantaged areas. Three families were single-parent homes. Most mothers were unpaid carers or self-employed; two were in full-time employment. One father was an unpaid carer; the majority of fathers were in full-time employment. Three families included a critical worker.</p> <p><b>Sample size:</b> 16</p> <p><b>Location:</b> Scotland</p>	<p><b>Health outcomes, mental health and access to healthcare</b></p> <p>One category (of three) with two subcategories had the most relevance to the domains of this rapid review:</p> <p><b>Health, wellbeing and care</b></p> <ul style="list-style-type: none"> <li>• Impact on children’s physical health</li> <li>• Impact on children’s mental health</li> </ul> <p><b>Impact on children’s physical health:</b> many families suspended care support due to increased risk from underlying health conditions. Family members carried out most physical care. Some whole families quarantined due to the difficulty for children with ASND in avoiding contact with other members of the household for those who were shielding. Some carers or personal assistants were still involved in care.</p> <p><b>Impact on children’s mental health:</b> The abrupt closure of schools caused anxiety. Most families reported that school work, missing peers, missing other activities and confusion about the situation contributed to poorer mental health. Children’s mental health was affected by concerns about COVID-19 itself.</p> <p>A link between mental and physical health was noted. Children’s ability to eat was negatively impacted (under- or over-eating) by anxiety in four families. Getting adequate exercise was mentioned by eleven families. Exercise was a challenge for some, with children refusing to go outside (fear of virus or rule breaking), however for others regular exercise was managed.</p> <p>Some children were happier and more keen to learn because school-related stress was removed.</p> <p>Within other categories:</p> <p><b>Impact of lockdown on education (within Education category):</b> The impact varied. Older children often</p>	<p>Outcomes not relevant to the rapid review were not extracted (Two main categories: Education and Emerging from lockdown).</p> <p>Aim clear and appropriate methods used. Most interviews were via email and two were online.</p> <p>Data seems to have been collected and analysed appropriately (but no mention of double coding/ validation).</p> <p>Lack of detail about participant selection (and possible bias), non-participation, form of interview data, data saturation, researcher influence and bias, ethics and consent process.</p> <p>Authors note why it was not possible to include children as participants.</p>

			<p>reported as struggling with anxiety, some having difficulty accessing their usual mental health support. For others, lack of routine impacted on children dramatically – ability to socialise, sleep and eat.</p> <p><b>Emerging from lockdown:</b> school closure had had a profound impact on whole family. Anxieties about children who missed significant education and soon to go into a more uncertain world.</p>	
<p><b>Greenway &amp; Eaton-Thomas (2020)</b>  <u>Parent experiences of home-schooling children with special educational needs or disabilities during the coronavirus pandemic.</u>  British Journal of Special Education 47(4), pp. 510-535.  doi: 10.1111/1467-8578.12341</p>	<p><b>Study Design:</b> Mixed methods</p> <p><b>Data collection dates:</b> June to July 2020</p>	<p><b>Participants:</b> Parents home-schooling children with special educational needs or disabilities (SEND) during the pandemic. Parents: aged 20 to 50 years (8% aged 20-29, 31% aged 30-39, 41% aged 40-49, 12% aged 50-59); 95% female; 92% first time home-schooling; 8% no education, 19% secondary school, 25% sixth form/further education, 31% higher education, 15% postgraduate study, 10% other; 29% full-time employed, 34% part-time employed, 10% self-employed, 27% unemployed; 11% qualified teacher; 24% key-worker; 27% working from home; 22% furloughed.</p> <p>Children (n=238): 63% male; 6% age 0-4, 55% aged 5-10, 48% aged 11-16, 1% aged 17+; 54% formal statement/ECHP (13% unsure); teaching assistant/learning support at school 52% (18% unsure); pre-pandemic mainstream 74%, special school/unit 5%, mixed mainstream &amp; special/unit 7%, home-school 2%, other 2%; receiving home-schooling 68%; siblings at home 76%; sibling with formal statement/ECHP 25% (2% unsure).</p> <p>Specific learning difficulty 33%, Moderate learning difficulty 43%, Severe learning difficulty 13%, Profound and multiple learning difficulties 11%, Behaviour, emotional and social difficulty 45%, Specific mental health</p>	<p><b>Mental health</b></p> <p>In terms of disadvantage their child had faced, eight parents commented that lack of social interaction had had a negative impact on their child's mental health. The main negative impacts parents felt home-schooling would have on their child (128 parents commented) was not seeing friends (36%) and not having a routine (36%; these were significantly higher percentages than other impacts). Re-integration/adjustment back to school was a concern for 26 parents with a further 29 commenting on the impact this would have on children's mental health. In contrast, eight parents felt home-schooling had a positive effect on their child (better performance and less stress).</p> <p>85% of parents felt they had not received enough support for their child's psychological needs.</p>	<p>Online survey with open and closed questions. Results not relevant to the rapid review were not extracted.</p> <p>Qualitative methods appropriately used; proportion of data double coded, and quotes presented to support findings.</p> <p>Self-selected sample which may be biased – authors note possible bias particularly against parents of children with more severe SENDs. Unclear if sample represents the population.</p> <p>Questions adapted from previously reported study, unknown if validated and no composite scoring. Statistics appropriate.</p> <p>Details needed on justification for mixed methods and</p>

		<p>needs 6%, ADHD/ADD 49%, Speech, language and communication needs 27%, Autistic spectrum disorder 73%, Visual impairment 10%, Hearing impairment 37%, Multisensory impairment 53%, Motor impairment 34%, other physical disabilities/conditions 66%.</p> <p><b>Sample size:</b> 238</p> <p><b>Location:</b> UK</p>		<p>divergences between quantitative and qualitative findings, but results are presented and integrated appropriately.</p>
<p><b>Jackson et al. (2021)</b>  <u>The regional impact of COVID-19 on the certification of vision impairment in Northern Ireland.</u>  Ophthalmic and Physiologic al Optics, 41(1), pp.136-143.doi: 10.1111/opo.12757</p>	<p><b>Study Design:</b> cohort</p> <p><b>Data Collection Dates:</b>  Period 1: 01/01/19-18/03/19  Period 2: 19/03/19-18/06/19  Period 3: 01/01/20-18/03/20  Period 4: 19/03/20-18/06/20</p>	<p><b>Participants:</b> people attending optician/ophthalmology services in primary care and secondary care. Of 115 people certified as sight impaired (SI) or severely sight impaired (SSI), 65 were women and 49 were male.</p> <p><b>Sample size:</b> c130,000 consultations</p> <p><b>Location:</b> Northern Ireland</p>	<p>In 2019, during the 3-month period (19 March 2019–18 June 2019), 115 individuals were certified as sight impaired (SI 36, SSI 75, unspecified 4). Of those certified, 65 were female, 49 male. Principal causes of certification were: Age-related macular degeneration (AMD) (N = 45), glaucoma (N = 20) and diabetic eye disease (DED) (N = 10). Mean VA, recorded from the better eye of those certified, was 0.96 LogMAR.</p> <p>In the 3 months following the onset of lockdown (19 March 2020–18 June 2020), only 37 individuals were certified (SI 6, SSI 31), 12 female and 25 male. AMD was the most frequent cause of sight impairment (N = 20). There were only two DED certifications and one due to glaucoma. Mean VA in the better eye of those certified was 1.15LogMAR.</p> <p>The numbers of CVI certifications completed following the introduction of COVID-19 lockdown fell by 68%, compared to the 2019 data. There was a significant reduction in the proportion of female certifications (<math>p = 0.01</math>), and in certifications due to glaucoma (<math>p = 0.02</math>). The proportion of those certified as SSI as opposed to SI in the period after the onset of lockdown rose from 68% in 2019 to 84% in 2020. The mean VA of those certified in the period after the onset of lockdown, when compared to those certified in the other three periods,</p>	<p>GOS: general ophthalmic services (primary care).  NIPEARS: Northern Ireland primary eyecare and referral service.  HES: Hospital eye service.  AMD: age-related macular degeneration.  DMO: diabetic macular oedema.  Study benefits from reviewing all submitted sight loss certifications in two hospital trusts covering all of Northern Ireland and provides comparisons with pre-pandemic data, and included data on diagnosis, visual acuity, age and gender.  No demographic data on those actually</p>

			<p>was worse by between 0.21 and 0.19 LogMAR (p = 0.06).</p> <p>The authors conclude that some people with deteriorating eyesight have not accessed services since the onset of the pandemic and that as a result a future wave of certifications of SI and SSI is anticipated.</p> <p><b>Service data</b></p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">Time period</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>GOS attendances</td> <td>103,950</td> <td>119,959</td> <td>105,783</td> <td>3,142</td> </tr> <tr> <td>NIPEARS new appointments</td> <td>3,646</td> <td>5,777</td> <td>5,085</td> <td>3,710</td> </tr> <tr> <td>NIPEARS review appointments</td> <td>384</td> <td>628</td> <td>480</td> <td>180</td> </tr> <tr> <td>HES attendances</td> <td>18,054</td> <td>21,584</td> <td>18,822</td> <td>7,417</td> </tr> <tr> <td>AMD attendances</td> <td>4,693</td> <td>5,211</td> <td>4,380</td> <td>2,703</td> </tr> <tr> <td>Glaucoma attendances</td> <td>1,275</td> <td>1,789</td> <td>1,342</td> <td>604</td> </tr> <tr> <td>DMO attendances</td> <td>213</td> <td>182</td> <td>187</td> <td>111</td> </tr> <tr> <td>Certifications</td> <td>94</td> <td>115</td> <td>125</td> <td>37</td> </tr> <tr> <td>SSI</td> <td>67</td> <td>75</td> <td>82</td> <td>31</td> </tr> <tr> <td>SI</td> <td>27</td> <td>36</td> <td>40</td> <td>6</td> </tr> </tbody> </table>		Time period				1	2	3	4	GOS attendances	103,950	119,959	105,783	3,142	NIPEARS new appointments	3,646	5,777	5,085	3,710	NIPEARS review appointments	384	628	480	180	HES attendances	18,054	21,584	18,822	7,417	AMD attendances	4,693	5,211	4,380	2,703	Glaucoma attendances	1,275	1,789	1,342	604	DMO attendances	213	182	187	111	Certifications	94	115	125	37	SSI	67	75	82	31	SI	27	36	40	6	<p>presenting to optometry or ophthalmic outpatients. Confounding not addressed.</p>
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<p><b>Kavanagh et al. (2021)</b> <a href="#">Health and healthcare for people</a></p>	<p><b>Study Design:</b> cohort</p>	<p><b>Participants:</b> Adults of age 16-64 years <b>Sample size:</b> 12,703 <b>Location:</b> UK wide <b>Demographics:</b> Disabled: 42% male, 86% white</p>	<p><b>Disability</b> 17.4% of the sample reported being disabled. These tended to be older, female and of white UK ethnicity than non-disabled people. <b>Health:</b></p>	<p>Study funded by Economic and Social Research Council (ERSC). The study had ethical approval.</p>																																																											



<p><u>with disabilities in the UK during the COVID-19 pandemic.</u> Disability and health journal, 15(1), p.101171. doi:10.1016/j.dhjo.2021.101171</p>	<p><b>Data Collection Dates:</b> April-May 2020</p> <p>Data were collected as part of the longitudinal 'Understanding Society' survey.</p> <p>Sampling method was population-based cluster sampling based on a national database of postcode addresses.</p> <p>Data collected by computer assisted interview, computer assisted self-completion and online survey.</p>	<p>Non-disabled : 49% male, 84% white</p>	<p><b>Presence of a long-term condition:</b>  Disabled: 73%  Non-disabled : 33%</p> <p><b>Instructed to shield:</b>  Disabled: 15%  Non-disabled :2.4%</p> <p><b>Reporting COVID-19 symptoms:</b>  Disabled people were no more likely to report COVID-19 symptoms to non-disabled people but were more likely to be hospitalised due to COVID-19: RR 3.0 (95% CI 1.07, 8.03).</p> <p><b>Mental health/loneliness:</b>  Reports distress:  Disabled: 54%  Non-disabled :37%; RR 1.15 (95% CI 1.05, 1.26)  Reports loneliness:  Disabled: 26%  Non-disabled :11%; RR 1.75 (95% CI 1.46, 2.09).</p> <p><b>Access to healthcare:</b>  Waiting for an intervention:  Disabled: 42%  Non-disabled:15%; RR 2.41 (95% CI 2.12, 2.74)  There was no greater likelihood of treatment cancellation for disabled people compared to non-disabled people.</p> <p><b>Outcomes for people with chronic conditions:</b></p> <table border="1" data-bbox="1122 1134 1659 1311"> <thead> <tr> <th></th> <th>Disabled</th> <th>Non-disabled</th> </tr> </thead> <tbody> <tr> <td>Need a GP</td> <td>60%</td> <td>21%</td> </tr> <tr> <td>Need prescription</td> <td>71%</td> <td>28%</td> </tr> </tbody> </table>		Disabled	Non-disabled	Need a GP	60%	21%	Need prescription	71%	28%	<p><b>Strengths:</b> Study benefits from an existing data collection mechanism as part of a larger, ongoing longitudinal study.</p> <p>Analyses are controlled for pre-existing differences in mental health between disabled and non-disabled people.</p> <p><b>Limitations:</b> some demographic differences between groups. Disability status is self-reported. Survey response rate c50% (reported as 'only half'), with potential for selection bias. Authors report that the survey is likely to under-represent people with learning impairments and it is possible they experienced more difficulties during COVID-19 than people with other impairments.</p>
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<p><b>Naylor et al. (2020)</b>  <u>COVID-19 Lockdown Affects Hearing Disability and Handicap in Diverse Ways: A Rapid Online Survey Study. Ear and hearing.</u>  41(6): 1442-9.  doi: 10.1097/AUD.0000000000000948</p>	<p><b>Study Design:</b> cross-sectional (24-item online)</p> <p><b>Data Collection Dates:</b> 29 May to 15 June 2020</p>	<p><b>Participants:</b> Adults with audiometric hearing loss; n=53 (41%) moderate to profound, n=76 (59%) mild</p> <p>self-reported unaided hearing ability: better n=68 (53%), worse n=61 (47%)</p> <p>Female: n=62 (48.1%), Male: n=67 (51.9%); age range: 27 – 76 years (mean: 64.4)</p> <p><b>Sample size:</b> 129</p> <p><b>Location:</b> Glasgow, Scotland</p>	<p><b>Health outcomes – hearing performance and communication</b></p> <p><b>Negative outcomes:</b></p> <ul style="list-style-type: none"> <li>• <b>Difficulty</b> for both groups in <b>understanding</b> people (<b>hearing and lip reading</b>) who are <b>wearing face masks</b>.</li> <li>• For those in the ‘worse hearing’ group compared to ‘better’, <b>hearing in video calls</b> was slightly <b>worse</b> than <b>being in the room</b>, p=0.005.</li> </ul> <p><b>Positive outcomes:</b></p> <ul style="list-style-type: none"> <li>• <b>TV and radio COVID-19 updates easy to follow</b> for most respondents.</li> </ul> <p><b>No clear consensus:</b></p> <ul style="list-style-type: none"> <li>• Hearing performance is worse in <b>video calls compared to phone calls</b>, spread of responses for both ‘worse’ and ‘better’ hearing groups.</li> <li>• <b>Communicating</b> with people at a <b>safe distance</b>, spread of response resulted in a spread of responses for both ‘worse’ and ‘better’ hearing groups.</li> <li>• <b>Use of video subtitles</b>, many (n=64) marked not applicable.</li> </ul> <p><b>Access to healthcare</b></p> <ul style="list-style-type: none"> <li>• <b>Low level concern</b> over lack of audiology services for hearing aid maintenance.</li> </ul>	<p>Specific population in terms of computer literacy and geographical location. Demographic details limited, no identification of respondents who use sign language. Confounding factors that may have contributed to findings were not fully explored. Outcome measures self-reported.</p>						

			<ul style="list-style-type: none"> <li>• <b>Low level concern</b> that face masks interfere with wearing hearing aids.</li> </ul> <p><b>Mental health</b></p> <p><b>Negative outcomes:</b></p> <ul style="list-style-type: none"> <li>• <b>Moderate</b> level of <b>worry</b> with regards to <b>communication</b> with others if wearing <b>face masks</b> becomes more common.</li> <li>• <b>Strong</b> concern in 'worse hearing' group compared to 'better hearing' group that <b>anxiety</b> will increase regarding <b>going to public places</b> due to <b>communication</b> with people wearing face masks or at a distance, <math>p &lt; 0.001</math>.</li> <li>• <b>Video calls</b> and conversing with healthcare professionals <b>wearing masks</b> were described as <b>stressful</b>.</li> <li>• <b>High</b> level of <b>worry</b> in 'worse hearing' group if hearing aids stop working or not able to get batteries, <math>p &lt; 0.001</math>.</li> </ul> <p><b>Positive outcomes:</b></p> <ul style="list-style-type: none"> <li>• <b>Moderate</b> level of <b>relief</b> with regard to not being obliged to attend <b>social gatherings</b> where individual won't hear well, more pronounced in those with self-reported unaided hearing loss as 'worse' compared to 'better', <math>p &lt; 0.001</math>.</li> <li>• Some participants reported <b>enjoying quieter outdoor environment</b>.</li> </ul> <p><b>No clear consensus:</b></p> <p>Enjoyment of video calls, range of responses but those in 'worse hearing' group tended to enjoy less.</p>	
<p><b>Office for National Statistics (2021)</b></p> <p><u>Updated estimates</u></p>	<p><b>Study design:</b> cohort</p> <p><b>Data collection dates:</b> 24 January</p>	<p><b>Participants:</b> disabled people aged 30 to 100 years identified by self-reported disability status on the 2011 Census (<math>n=5,038,767</math>, 17.2%).</p> <p>Disability status was self-reported as collected in the 2011 Census; those who said</p>	<p><b>Health outcomes - mortality</b></p> <p><b>Men:</b> risk of death involving the coronavirus (COVID-19) was 3.1 times greater for more-disabled men and 1.9 times greater for less-disabled men, compared with non-disabled men.</p>	<p>Large sample size using routinely collected data although no demographic data presented. Confounding was explored.</p>

<p><u>of coronavirus (COVID-19) related deaths by disability status, England: 24 January to 20 November 2020.</u></p>	<p>to 20 November 2020</p>	<p>in the Census that their day-to-day activities were “limited a little” or “limited a lot” are referred to here as “less-disabled” and “more disabled” respectively, whereas people reporting no limitation to their activities are referred to as “nondisabled”.</p> <p><b>Sample size:</b> 29,295,161</p> <p><b>Location:</b> England</p>	<p><b>Women:</b> risk of death was 3.5 times greater for more disabled women and 2.0 times greater for less-disabled women, compared with non-disabled women.</p> <p>After adjusting for personal and household characteristics, a smaller but statistically significantly raised risk of death remained unexplained for more-disabled and less-disabled women (1.4 and 1.2 times respectively) and more-disabled men (1.1 times) but not for less-disabled men. Therefore, no single factor could explain the considerable raised risk of death and place of residence, socio-economic and geographical circumstances, and pre-existing health conditions all play a part; an important part of the raised risk is because disabled people are disproportionately exposed to a range of generally disadvantageous circumstances compared with nondisabled people.</p> <p>Patterns in excess COVID-19 mortality risk experienced by disabled people remained largely unchanged between the first and second waves (12 September 2020 onwards) of the pandemic.</p>	<p>Learning impairment is based on a clinical diagnosis by a medical practitioner, whereas disabled status was defined based on responses to a question on the 2011 Census.</p> <p>England only sample and should be noted that the proportion of people who reported to have a disability in the <u>2011 Census</u> in Wales was notably higher than in England (22.7% vs. 17.6%, respectively), therefore likely that number of deaths of disabled people in Wales is higher.</p>
<p><b>Patel et al. (2021)</b> <u>The Experience of Carers of Adults With Intellectual Disabilities During the First COVID-19 Lockdown</u> Journal of policy and</p>	<p><b>Study Design:</b> Qualitative survey</p> <p><b>Data collection dates:</b> June and early July 2020</p>	<p><b>Participants:</b> Parents of adults with learning impairment. Ages ranged from 44 to 82 years (mean = 66) with only two parents younger than 60 years.</p> <ol style="list-style-type: none"> <li>1. Participant the main unpaid carer of an adult (18+) with learning impairment.</li> <li>2. Have access to the internet and comfortable with taking part in an interview.</li> <li>3. Living in the UK.</li> </ol> <p>Relationship to patients with learning impairment - N=7 Mothers N=1 Father.</p>	<p>Four main themes were identified: powerless and unappreciated; coping under lockdown; support; and the impact of lockdown on well-being. Mostly relating to mental health, some lack of access and healthcare outcomes.</p> <p>Four main themes were identified:</p> <p><b>Powerless and unappreciated:</b></p> <ul style="list-style-type: none"> <li>• Concern among parents about the future and not knowing what was going to happen.</li> <li>• Not having control.</li> <li>• People not being aware or appreciating the challenges faced as parents of adults with learning impairment during lockdown.</li> </ul> <p><b>Support:</b></p>	<p>Clear aims and appropriate methods used. Recruitment strategy clearly explained.</p> <p>Data seems to have been collected and analysed appropriately. Themes clearly presented.</p> <p>The findings are based on a small, affluent and mostly female sample of parents of adults with learning impairment.</p>

<p>practice in intellectual disabilities, doi: 10.1111/jppi.12382</p>		<p><b>Sample size:</b> (n = 8) Family carers of adults with learning impairment.</p> <p><b>Location:</b> UK</p>	<ul style="list-style-type: none"> <li>• Lack of support and communication from statutory services. Many felt they were left on their own.</li> <li>• Support received with the aid of technology especially videoconferencing.</li> <li>• Support available prior to COVID-19 pandemic disappeared.</li> </ul> <p><b>Impact of lockdown on well-being:</b></p> <ul style="list-style-type: none"> <li>• Caring was said to be relentless at times and parents described the impact on their physical as well as their mental health. They were constantly worried, exhausted and not time to relax.</li> <li>• Due to strict social isolation during lockdown parents reported feeling isolated and frustrated which sometimes resulted in family tensions.</li> </ul> <p>But positive aspects to lockdown which was beneficial for their own mental and physical health.</p> <p>Parents reported that there had been both positive and negative impacts on their son's/daughter's well-being. A lack of understanding regarding COVID-19 and need for restrictions was said to have heightened the anxiety for some individuals.</p>	<p>Findings may have been different if the participants were from a socially and economically disadvantaged environment. Access to the internet, provide valuable information as well as support.</p> <p>The positive aspects to lockdown reported by some may not be pertinent for those living in non-urban areas.</p>
<p><b>Paulauskai te, et al (2021) <u>My son can't socially distance or wear a mask: How families of preschool children with severe developme</u></b></p>	<p><b>Study Design:</b> Mixed methods</p> <p><b>Data collection dates:</b> May to July 2020</p>	<p><b>Participants:</b> Parents of very young children (pre-school) with moderate to severe development delays and challenging behaviours.</p> <p>Parents: 95.5% mothers; 37% aged 25-34 years, 45% aged 35-44, 16% aged 45-54, 1% aged 55-64; 62% White, 1% Black or Black British – Caribbean, 16% Black or Black British – African, 2% Asian or Asian British – Indian 2, 3% Asian or Asian British – Pakistani, 13% Other Ethnic Group, 1% Prefer not to say; 48% lived in London, 24% the North East of England, 28% North West</p>	<p><b>Health outcomes, access to healthcare and mental health</b></p> <p><b>Family mental well-being:</b> 88% had to manage additional mental health needs of their child.</p> <p><b>Access to services:</b> 91% of families had difficulties maintaining adequate support for their child. 76% reported abrupt disruption of access to usual support from health services. Parents reported disruption in accessing medical care for COVID-19 (67%) and non-COVID-19 (63%) health problems for their child.</p> <p><b>Use of telehealth:</b> Most parents had difficulties motivating or enabling their children to engage in remote appointments (85%). Many parents were dissatisfied</p>	<p>Online survey with open and closed questions. Results not relevant to the rapid review were not extracted.</p> <p>Lack of detail about children's characteristics.</p> <p>Methods used appropriate. Two coders for qualitative data and quotes support findings.</p>

<p><u>ntal delays and challenging behavior experience d the COVID-19 pandemic.</u> Journal of Mental Health Research in Intellectual Disabilities. doi: 10.1080/19315864.2021.1874578</p>		<p>of England; Current situations included 12% sick or self-isolating, 11% working from home, 6% mixture of workplace and working from home, 11% mainly based at workplace, 59% not at work; Workplace settings included (but note missing data) 6% in Education, 6% Social care or other local government, 12% private sector, 5% voluntary sector, 5% community or user-led organisations, 11% healthcare, 11% hospitality, 44% do not work; 14% were caring for other people; 31% had high personal risk of severe COVID-19 infection consequences; 17% had COVID-19 infection in household.</p> <p><b>Sample size:</b> 88 (out of 158 invited)</p> <p><b>Location:</b> England</p>	<p>with video (40%) and telephone (44%) assessments for their child's progress and for psychological treatment. But email and text messages were preferred by 47% for keeping in contact with services.</p> <p><b>Future concerns:</b> free text responses (n=36) revealed three main themes – access to services, education and health, and going back to 'normal'. Access to services: many parents were concerned whether their child would be able to access health appointments booked pre-pandemic as well as about funding and provision of services. Education and health: many parents were concerned about the impact home-schooling has on their child's development and progress. They also feared sending their children back to school because they were not sure if was safe to do so.</p>	<p>Unclear how representative the sample is; participants were recruited from an RCT and the authors highlight that the findings may not represent those from Black, Asian and minority ethnic groups. Measures appropriate but not validated. Note that percentages were calculated excluding missing data. More detail on justification for mixed methods, divergences between quantitative and qualitative findings and how results were integrated would be useful.</p>
<p><b>Rauf et al. (2021)</b> <u>COVID-19-related prescribing challenge in intellectual disability.</u> BJPsych open, 7(2). doi: 10.1192/bjo.2021.26</p>	<p><b>Study Design:</b> cohort study</p> <p><b>Data Collection Dates:</b> data were collected over a 6-month period, including a 12-week pre-lockdown (1 January to 22 March 2020) and 14-week lockdown period (23 March to 30 June 2020).</p>	<p><b>Participants:</b> 2,909 psychiatric consultations.</p> <p><b>Sample size:</b> 2,909</p> <p><b>Location:</b> Coventry and Warwickshire</p>	<p>There was an increase of 14.5% in psychiatric services during lockdown: from 1218 psychiatric consultations across the service (133 in CAMHS and 1085 in adult services), amounting to an average of 103 consultations per week (pre lockdown) to 1691 psychiatric consultations across the service (227 in CAMHS and 1464 in adult services) during lockdown, amounting to an average of 118 consultations per week.</p> <p>Before lockdown, MDT input was in 2 contacts out of 133 consultations (0.17 per week). During lockdown, MDT input was in 10 contacts out of 227 consultations (0.71 per week). This fourfold-per week increase in MDT input predominantly involved community nursing, occupational therapy and psychologists.</p>	<p>Clinician reported outcomes within a service evaluation. No ethical approval required. Observational survey (service evaluation) reliant upon clinicians to report details of diagnoses and treatments. Study is related to the 'Stopping Overmedication of People with a Learning</p>

				<p>Disability, Autism or Both' (STOMP) programme.</p> <p>Strengths: study benefits from large sample size with data collected from a large and diverse specialist learning impairment service.</p> <p>Limitations: Duration of the pre-lockdown period (12 weeks) is less than the lockdown period (14 weeks), which may inflate the figures for the second time period. The authors compensate for this by presenting data as a weekly rate.</p> <p>No demographic data presented. No statistical analyses reported. Confounding not explored.</p> <p>MDT data are incomplete, particularly in relation to specific professions, risking bias.</p> <p>It is not possible to conclude whether observed changes were caused by the pandemic or in response to deterioration in mental health due to independent factors.</p>
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<p><b>Rawlings et al. (2021)</b>  <u>Exploring how to deliver videoconferenced-mediated psychological therapy to adults with an intellectual disability during the coronavirus pandemic.</u>  Advances in Mental Health and Intellectual Disabilities. 15(1): 20-32. doi: 10.1108/A MHID-06-2020-0014</p>	<p><b>Study design:</b> mixed methods</p> <p><b>Data collection dates:</b> May 2020</p>	<p><b>Participants:</b> adults with learning impairments referred for psychological therapy</p> <p>Demographics: 6 women, 1 man; all White British; age range 19-57 years</p> <p>Sensory ability: 5 service users reported having no auditory problems, whereas one was partially deaf and another sometimes struggled to hear, one client reported sight difficulties</p> <p>Reasons for referral included: anxiety (n=7), depression (n=3), anger (n=2), bereavement (n=1) and feeling disconnected with others (n=1) – a number of clients were referred for more than one difficulty</p> <p><b>Sample size:</b> 7</p> <p><b>Location:</b> Metropolitan Borough in the north of England</p>	<p><b>Access to healthcare - videoconference-mediated psychological therapy</b></p> <p><b>Overall perception:</b> none of the clients felt “unhappy” (but rather “happy” or “okay”), about having therapy over the phone.  Only one client felt “happy” about having therapy over video.</p> <p><b>Communication:</b>  6 clients felt that it would be ‘easy’ or ‘okay’ to speak to a therapist remotely.</p> <p>4 clients indicated that they felt anxious about speaking over the phone to someone they had never met in person.</p> <p>Clients often explained that they can “get shy”, be left feeling “not knowing what to say” and become “confused and flustered”.</p> <p>One client felt that therapy would be “easier over the phone” as there would be “less pressure” and it would be “easier to answer [questions]”, whereas during face-to-face therapy, she “would be more stressed and worrying [she] got things wrong”.</p> <p>Clients felt that they could talk for between 20 minutes to an hour.</p> <p><b>Provision of educational materials:</b> all clients would prefer to receive materials via post rather than by email or phone.</p> <p><b>Use of technology:</b> all clients had access to a landline phone, only 5 had a mobile phone.</p>	<p>Alongside identified themes, strategies to overcome issues and other considerations are presented.</p> <p>Low quality due to sample size which was limited by number of people who were suitable to communicate via telephone for the survey and very brief details of how qualitative data was recorded supplementary material (questionnaire) was not accessible.</p>
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			<p>3 clients reported having issues with the sound quality of their mobile phone.</p> <p>4 clients used their mobile phone to video call people.</p> <p>5 clients used a computer or tablet, which they said they found “easy” to use and used it daily or weekly.</p> <p>2 clients used their computer or tablet to video call.</p> <p>5 clients used the internet daily, had unlimited wi-fi and reported having a good connection most commonly used programs were WhatsApp and Microsoft Teams, none of the clients had heard of AttendAnywhere, Airmid-System One or AccuRX, 2 clients had heard of Zoom but never used it. 5 clients had someone to ask when they needed support using technology.</p>	
<p><b>Shakespeare et al. (2021)</b>  <u>Disabled people in Britain and the impact of the COVID-19 pandemic.</u>  Social policy &amp; administration, doi: 10.1111/spol.12758</p>	<p><b>Study Design:</b>  Qualitative interviews</p> <p><b>Data collection dates:</b> June to August 2020</p>	<p><b>Participants:</b> Disabled people (including carers of disabled children) and key informants from disability organisations</p> <p>Disabled people: 41 female, 27 male and 1 gender neutral; 4 from a Black or Minority Ethnic community; 33 lived with family, 26 lived alone and 7 lived in a residential setting.</p> <p>Impairments reported included Autism/neurodiversity (n=8), cognitive impairment (n=5), learning impairment (n=19), mental health condition (n=18), physical impairment (n=33) and sensory impairment (n=15).</p> <p><b>Sample size:</b> 69 disabled people (including 11 carers of disabled children); 28 informants from infrastructure organisations.</p> <p><b>Location:</b> England (n=30) and Scotland (n=38)</p>	<p><b>Health outcomes, access to healthcare and mental health</b></p> <p>Themes with relevant outcomes (non-relevant themes were <i>touch and presence</i> and <i>messaging and leadership</i>):</p> <ul style="list-style-type: none"> <li>• Disabling disruptions</li> <li>• Social care reversions</li> </ul> <p><b>Disabling disruptions:</b> mental health and wellbeing were impacted by the disruption of established social practices and routines. Specific issues for disabled people amplified the disruption. Many feared they would be at significant risk if they caught COVID-19. Organisations were concerned about the long-term impact of the pandemic on disabled people’s mental health and wellbeing.</p> <p>Significant changes in health care and support lead to cancellation of therapy and annual check-ups. Video call and phone therapies were not thought to be particularly successful. There were concerns, especially for children, about the negative impacts of this such as preventable</p>	<p>Some of the themes touch upon health related issues, but these issues are not outcomes (e.g. communication about shielding, messaging about Do Not Attempt Resuscitation), thus have not been extracted.</p> <p>Aims clear and appropriate methods used.</p> <p>Recruitment and data collection mostly clear for disabled people participants (though no eligibility criteria stated), but no details about the informants from</p>

			<p>medical problems being missed. Provision, repair and service of assistive products and aids was severely affected, impacting functioning and dependency of groups such as children and people with dementia, and their carers.</p> <p>Lack of PPE for care homes, homecarers and personal assistants. Some disabled people's organisations stepped in and sourced PPE for their members.</p> <p><b>Social care reversions:</b> Increased reliance on family and other informal carers due to cancelled or limited care services and participants reducing contact in their own homes because of anxiety about number of contacts. For one participant, this impacted their physical and mental health.</p> <p>Increased anxiety and loss of confidence were reported due to lack of social bonds, which were highlighted by the pandemic to be fragile, particularly for those with learning impairments. Boredom also mentioned due to limited social options. Organisations made a difference to people's mental health and wellbeing, filling the gap social care left. They changed the way they worked to bring people together and provide direct services (e.g. emergency support, food deliveries).</p>	<p>infrastructure organisations (no sample characteristics but appear to be included in results).</p> <p>Lack of detail about researcher influence, consent process, data saturation, reasoning for selected quote.</p> <p>Details of analysis given including double coding.</p> <p>Authors note few people from Black and Minority Ethnic groups and from care homes (but note organisations included to give information about this setting), limiting what can be concluded about the experiences of these groups. They also note that the social care system is different in Wales (Northern Ireland is similar to Scotland).</p>												
<p><b>Step toe &amp; Di Gessa (2021)</b>  <u>Mental health and social interactions of older people with physical disabilities in England</u></p>	<p><b>Study Design:</b> cohort</p> <p><b>Data Collection Dates:</b> June-July 2020</p>	<p><b>Participants:</b> people of age 50 years and older including some younger partners.</p> <p><b>Sample size:</b> n=4887</p> <p><b>Location:</b> England</p> <p><b>Demographics :</b></p>	<p><b>Mental health and QOL by ADL impairment</b></p> <table border="1" data-bbox="1122 1066 1630 1374"> <thead> <tr> <th></th> <th>NI</th> <th>I</th> <th>OR (95% CI)</th> </tr> </thead> <tbody> <tr> <td>Depression</td> <td>16.1%</td> <td>28.9%</td> <td>1.78 (1.44-2.19) *</td> </tr> <tr> <td>Anxiety</td> <td>7.4%</td> <td>15.8%</td> <td>2.23 (1.72-2.89) *</td> </tr> </tbody> </table>		NI	I	OR (95% CI)	Depression	16.1%	28.9%	1.78 (1.44-2.19) *	Anxiety	7.4%	15.8%	2.23 (1.72-2.89) *	<p>* p&lt;0.0001</p> <p>NI: no impairment  I: impairment</p> <p>Odds ratios are adjusted statistically for pre-pandemic outcome measures, age, sex, wealth, ethnicity, presence of a spouse or partner, number of</p>
	NI	I	OR (95% CI)													
Depression	16.1%	28.9%	1.78 (1.44-2.19) *													
Anxiety	7.4%	15.8%	2.23 (1.72-2.89) *													

during the COVID-19 pandemic: a longitudinal cohort study. The Lancet. Public health 6(6), pp. e365-e373. doi: doi.org/10.1016/S2468-2667(21)00069-4I

	ADL	
	Not impaired	Impaired
Female	51.0%	60.4%
White	49.0%	39.6%
	Mobility	
	Not impaired	Impaired
Female	47.0%	62.9%
White	53.0%	37.1%

Loneliness	32.0%	39.6%	1.52 (1.26-1.84) *
Poor sleep	39.5%	45.9%	1.44 (1.20-1.84) *
Weekly family contact	86.9%	83.3%	0.70 (0.55-0.89) *

People with ADL impairment also had poorer outcomes for ONS life satisfaction, ONS purpose in life, CASP-12 QOL (all p<0.0001).

**Mental health and QOL by mobility impairment**

	NI	I	OR (95% CI)
Depression	15.8%	24.6%	1.80 (1.47-2.21) *
Anxiety	7,6%	12.0%	1.65 (1.24-2.18) *
Loneliness	30.8%	38.4%	1.51 (1.26-1.81) *
Poor sleep	38.0%	45.6%	1.45 (1.24-1.73) *
Weekly family contact	87.7%	83.4%	0.66 (0.53-0.84) *

People with mobility impairment also had poorer outcomes for ONS life satisfaction, ONS purpose in life, CASP-12 QOL (all P<0.05).

people in the household, and chronic pain.  
**Strengths:** Study benefits from an existing data collection mechanism as part of the English Longitudinal Study of Ageing (ELSA). ELSA is a nationally representative, large, well characterised sample of older men and women. The study sample is periodically refreshed with new participants to ensure that the complete age profile from 50 years and older is maintained. Study includes validated instruments to assess mental health outcome measures. All methods are described clearly. The funders of the study had no role in study design, data collection, data analysis, data interpretation, or writing of the report. Analyses are adjusted for important socioeconomic and demographic covariates and pre-pandemic values of mental health

				<p>outcomes. High survey response rate of 74.9%.</p> <p><b>Limitations:</b> All COVID-19 cases were defined by reporting of symptoms, since antigen tests were unavailable.</p> <p>The majority of people in the ELSA sample are of White European origin, so findings might not be generalisable to other ethnic groups.</p> <p>Findings are also specific to older people in England. Some differences in demographic data between groups.</p> <p>Disability status is self-reported.</p> <p>ELSA has non-random cumulative attrition, whereby people in poor health are more likely to die sooner than healthier participants.</p>
<p><b>Theis et al. (2021)</b> <a href="#">The effects of COVID-19 restrictions on physical activity and</a></p>	<p><b>Study design:</b> cross-sectional</p> <p><b>Data collection dates:</b> June – July 2020</p>	<p><b>Participants:</b> Parents/carers of children and young adults with physical and/or learning impairments (age criteria not stated) answered on their behalf.</p> <p>Age range stated 12.3 years +/- 4.3</p> <p>64% male</p>	<p><b>Mental health outcomes</b></p> <p>Focus of the study related to physical activity opportunities and mental health.</p> <p>Over 90% of respondents reported their child's mental health had declined during lockdown.</p>	<p>No specific inclusion criteria stated in the research question re age range or type of impairment.</p>

<p><u>mental health of children and young adults with physical and/or intellectual disabilities.</u> Disability and health journal 14(3), p. 101064. doi: 10.1016/j.dhjo.2021.101064</p>		<p>76% had a learning impairment (69.5% severe, 28.4% moderate, 2.1% mild) 33.6% had a physical impairment (28.6% non-ambulant wheelchair users, 47.6% semi-ambulant, 23.8% fully ambulant)</p> <p>Commonest primary diagnoses were autism (41%) and Cerebral Palsy (29%) with a range of other conditions (12 others specified).</p> <p><b>Sample size:</b> 122 (demographics given for 125 respondents but 3 excluded from analysis due to incomplete data)</p> <p><b>Location:</b> Gloucestershire, UK.</p>	<p>Greatest reported impact was a trend towards more negative behaviour (just over 30%).</p> <p>States that “respondents reported aggressive, self-harming and anxious behaviours as a result of lockdowns” (no breakdown/figures given).</p> <p>Graph shows low mood reported in approximately 15% (figures not provided) .</p> <p>Mental health rated as ‘much worse’ during lockdown than before by 42% and a bit worse by 23% in relation to inability to access schools, other special facilities and classes and outdoor play.</p> <p>“32% rated maintaining previous friendships, overall independence, overall mood, relationships and behaviour as being ‘much worse’ during lockdown than before and 42% rated it ‘a bit worse’”.</p> <p>Carers were also asked to suggest what could help their child to maintain their physical and mental health, with the commonest suggestions being school (52/177 suggestions), therapy (48/177), respite (29/177) equipment (20/177), activities (18/177) and routine (10/177).</p>	<p>Online survey produced with Stakeholder input and modified some existing validated measures.</p> <p>Included a single subjective Likert scale question asking about impact of lockdown on mental health.</p> <p>Subsequently 10 questions adapted from the validated Strengths and Difficulties questionnaire modified to refer to the impact of lockdown restrictions.</p> <p>Confounding not explored.</p> <p>Survey disseminated through a range of providers (health and 3rd sector) plus social networks to access parents/carers of disabled children and young adults.</p> <p>Range of physical and learning impairments represented. No demographic data on socio-economic status or ethnicity provided.</p> <p>No breakdown of differences between those with physical impairments and</p>
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				<p>learning impairments or both.</p> <p>Stated response rate of approximately 31%. Unclear how calculated given that survey was advertised on social media.</p> <p>Included results based on descriptive statistics.</p>
<p><b>Williamson et al. (2021)</b>  <u>Risks of COVID-19 hospital admission and death for people with learning disability: population based cohort study using the OpenSAFELY platform</u>,          BMJ, 374:n1592          doi: 10.1136/bmj.n1592.</p>	<p><b>Study design:</b> Cohort study</p> <p><b>Data collection dates:</b> Two cohorts analysed:          Wave 1 (March to August 2020) and Wave 2 (September 2020 to February 2021)</p>	<p><b>Participants:</b> All patients aged &lt;105 years registered in a general practice that uses the TPP SystemOne software (approximately 40% of the population of England).</p> <p><b>Sample size:</b> total – 16,939,041          90,307 adults on the learning disability register (41% female, 58% aged 16-44, 32% aged 45-64, 10% over 65) 90% white ethnicity, 6% South Asian, 2% Black, 1% mixed, 1% other, 31% from most deprived communities – index multiple deprivation =5, 9% living in residential care).          82% had mild to moderate learning impairment. 18% were identified as having severe to profound learning impairment, and 9% were in residential care.          Study also separately identified 7990 adults with Down’s syndrome (89% were on the LD register) or cerebral palsy 18,298 (38% on LD register).          14,221,716 adults (&gt;16) not on the learning disability register.          9298 children on the learning disability register (32% female, 79% white ethnicity, 11% South Asian, 4% Black, 4% Mixed, 3%</p>	<p><b>Health outcomes</b></p> <p>Adults:          During Wave 1, among those on LD register 0.6% had a COVID related hospital admission and there were 222 COVID related deaths recorded (0.25%).          Compared to admissions among 0.2% of adults not on the register and 13,737 COVID related deaths (0.1%).</p> <p>During Wave 2 the figures for those on the LD register were:          1.1% COVID related admissions          0.3% COVID related deaths</p> <p>Compared to adults not on the register:          0.4% COVID related admission          0.1% COVID related deaths</p> <p>Among children on the LD register there were 5 or fewer hospital admissions in wave 1 (limited data due to privacy rules).          In wave 2 there were 0.2% COVID related admissions among children on the LD register.          Deaths classed as COVID related were low among all children (5 or fewer in each group).</p>	<p>Very large study – records for 40% of the English population.</p> <p>Relied on learning impairment being coded in the medical records – there is known to be under registration. Possible that those with more severe learning impairment tend to have this coded which might lead to overestimate of the hazard ratios (however team note most of those identified were in mild to moderate category). Levels of comorbidities and residential care may also be under ascertained.</p> <p>Differences in demographics between groups.</p>

		<p>Other. 25% from most deprived communities (Index of multiple deprivation 5, &lt;1% in residential care).</p> <p>2637 children were identified as having Down's syndrome (35% were on the LD register).</p> <p>4631 children identified as having cerebral palsy (11% were on LD register).</p> <p>2,617,250 children not on the learning disability register.</p> <p><b>Location:</b> England</p>	<p>Hazard ratios</p> <p>For adults with LD for admission with COVID</p> <p>Wave 1= 5.3 (CI 4.9-5.8)</p> <p>Wave 2= 4.3 (4.1-4.6)</p> <p>For COVID related death</p> <p>Wave 1 8.2 (7.2-9.4)</p> <p>Wave 2 7.2 (6.4-8.1)</p> <p>"After excluding people aged ≥65 years and those with defined comorbidities, the estimated hazard of COVID-19 related hospital admission was 4.1 (95% confidence interval 3.3 to 5.2) after adjustment for age, sex, ethnicity, and geographical location, with little change after adjustment for deprivation or residential care status. Slightly attenuated associations were seen in wave 2 (3.0, 2.5 to 3.5) after adjustment for age, sex, ethnicity, and geographical location".</p> <p>Both Down's syndrome and cerebral palsy (to a lesser extent) were associated with increased hazard of hospitalization and death.</p> <p>(Down's syndrome wave 1: 10.6, 8.5 to 13.2 for COVID-19 related hospital admission; 36.3, 26.7 to 49.5 for COVID-19 related death; Cerebral palsy (wave 1: 5.0, 3.9 to 6.4 for COVID-19 related hospital admission; 5.8, 4.1 to 8.3 for COVID-19 related death) Similar numbers were found for wave 2.</p> <p>There were higher risks among those with severe to profound learning impairment compared with those with mild to moderate learning impairment, which was not explained by measured physical comorbidities or residential care status. The absolute number of deaths</p>	<p>Potential confounders adjusted for in the analysis = age, sex, ethnicity and geographical location. Team chose not to adjust for many comorbidities, as they were thought to be consequences of the learning impairment and so part of the causal pathway.</p> <p>Ethnicity data was missing for 28% of people for ethnicity and 30% of people for BMI. Multiple imputation for missing ethnicity data made little difference to the results. Pattern of results remained similar when only data from patients with a known BMI was analysed.</p> <p>Risk to children with learning impairment difficult to quantify due to small numbers and poor coding of LD among children. However the absolute risk of hospitalization and death remains low.</p>
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			<p>was higher among people with mild to moderate learning impairment.</p> <p>Hazard ratio for children &lt;16 with LD for admission with COVID</p> <p>Wave 1 6.2 (2.8-14.1)</p> <p>Wave 2 9.2 (5.9- 14.3)</p> <p>Authors recommend people with learning impairment be prioritized for vaccination, prompt access to COVID testing and healthcare.</p>	
<p><b>Wolstencroft (2021)</b> <u>'We have been in lockdown since he was born': a mixed methods exploration of the experiences of families caring for children with intellectual disability during the COVID-19 pandemic in the UK.</u> BMJ open 11(9), p. e049386.</p>	<p><b>Study Design:</b> Mixed methods</p> <p><b>Data collection dates:</b> mid-July 2020</p>	<p><b>Participants:</b> Mothers of children aged 5 to 15 years with significant limitations in cognitive and adaptive skills due to an identified genetic anomaly.</p> <p>A quarter of families were shielding due to concerns about vulnerability.</p> <p>Children: 14 male, 9 female; mean age 9 years (SD 2.9); 78% received extra help at school or attended a special educational needs school; White British (n=19), mixed white and black (n=1), Irish (n=1), Asian (n=1); 3 children had sex chromosome aneuploidies, 16 had CNV, 4 had SNV; 20 families included siblings; 2 children were non-ambulant, 15 were partly mobile, 6 were fully mobile; 7 were not fully continent; 3 were literate; None had sight or hearing impairments.</p> <p>39% had behavioural difficulties (SDQ) in the high to very high severity. Behavioural difficulties had a very high impact on the family's day to day life for 91%. 35% had been diagnosed with ASD and 5 had a diagnosis of ADD or ADHD.</p>	<p><b>Mental health, access to healthcare</b></p> <p>Restrictions on leaving home had been stressful for 87% of children.</p> <p>65% of children were worried about becoming infected and 35% were concerned about their physical health. Children were more worried about friends and family being infected by COVID-19 than themselves.</p> <p>The pandemic had led to some positive changes in their child's life for 74% of families.</p> <p>Three main themes identified in the qualitative analysis</p> <ul style="list-style-type: none"> <li>Managing pre-existing challenges in a time of increased strain for everyone 'you just feel like our life was so different to other people's'.</li> <li>Mixed emotions around the challenges and unexpected benefits of lockdown: 'The pandemic was nice but really hard'.</li> <li>Support matters.</li> </ul> <p><b>Managing pre-existing challenges.</b></p> <p><i>Subtheme: Planning for complex needs 'there's a lot more things that I need to do than the average sort of family':</i> Parents had to manage increases in behavioural and mental health problems (some of which reached a point of serious concern), uncertainties about co-</p>	<p>Online questionnaires and semi-structured interviews (same participants). Results not relevant to the rapid review were not extracted.</p> <p>Methods used appropriate. Independent coding completed and quotes support identified themes. Appropriate questionnaires used (some validated).</p> <p>More details on recruitment and sample to assess possible bias (consecutive sampling as part of wider study, non-response not detailed). Authors highlight that experiences likely differ</p>



<p>doi: 10.1136/bmjopen-2021-049386</p>		<p><b>Sample size:</b> 23</p> <p><b>Location:</b> UK</p>	<p>ordinating medical care (fewer resources) and new worries about explaining COVID-19.</p> <p><b>Mixed emotions.</b></p> <p><u>Subtheme: Happy at home: 'Everyone's keeping distance from me and that's how I like it':</u> Quite a few children were reported as being happy at home; it was a safe and comforting place with their own routines and no worries about the anxieties of school or the outside world. A few parents suggested their child's mental health had improved in lockdown, but for some their child's life and social skills had regressed which concerned the parents.</p> <p><u>Subtheme: Spending time together and slowing down: 'It brought us a lot closer together':</u> Taking things more slowly positively impacted parents' and children's wellbeing.</p> <p><b>Support matters</b></p> <p>This includes support for children's medical and psychological need, which varied significantly between participants.</p> <p><u>Subtheme: transition to telehealth: 'I don't think you can replace face to face with a telephone':</u> 91% of families described cancelled or postponed routine medical and social care appointments. Parents had varying experience of telehealth. Some enjoyed it and were grateful to have the appointments. Many reported that their children's complex needs and abilities meant specialist face-to-face care was needed. For some communicating their child's need remotely was challenging and for others the child was not able to communicate by phone thus not able to access support offered.</p>	<p>for non-female, non-white, single parents. Unclear if any divergences between quantitative and qualitative findings.</p>
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### 6.3 Quality assessment of studies Quantitative studies – using JBI checklists

#### Cohort studies

Questions	Baksh 2021	Bailey 2021	Jackson 2021	Kavanagh 2021	ONS 2021	Rauf 2021	Stephoe 2021	Williamson 2021
1. Were the two groups similar and recruited from the same population?	Yes – from the ISARIC4C CCP-UK an ongoing prospective cohort study in 260 hospitals across England, Scotland and Wales.	No – some differences shown in demographics between pre and post lockdown participants (table 1).	Unclear – no demographic data on those actually presenting to optometry or ophthalmic outpatients.	No – recruited from same population but not matched and some differences in demographics.	Unclear – no demographic information presented.	Unclear – no demographic data on those having consultations.	No - differences between groups but all from English Longitudinal Study of Ageing (ELSA), a nationally representative sample of men and women aged 50 years and older living in England.	No - some differences in baseline characteristics (table 1).
2. Were the exposures measured similarly to assign people to both exposed and unexposed groups?	Unclear – only states ‘We identified 566 (0.96%) patients who had a <b>diagnosis of ID</b> and matched these patients to general population controls.	Yes - COVID-19 pandemic.	Yes – COVID-19 pandemic (before and after).	Yes	Yes	Yes – COVID-19 pandemic (before and after).	Yes	No – authors state that not possible to identify everyone who has a learning impairment so might be underrepresented.
3. Was the exposure measured in a valid and reliable way?	Unclear – no detail.	Yes - COVID-19 pandemic.	Yes	No – self-report	No – self-reported disability from 2011 census.	Yes	No -self report	No – as above

4. Were confounding factors identified?	Yes	Yes	Yes – mention of age.	Yes	Yes - personal and household characteristics.	Yes – mentioned in limitations but not explored.	Yes	Yes
5. Were strategies to deal with confounding factors stated?	Yes	Yes	No	Yes	Yes – used statistical models.	No	Yes	Yes
6. Were the groups/participants free of the outcome at the start of the study (or at the moment of exposure)?	Yes	No – but adjustments made for baseline levels.	Yes	No – but adjusted for previous measure.	Yes	Not applicable	No – but added as covariate.	Yes
7. Were the outcomes measured in a valid and reliable way?	Yes	Yes – validated tools.	Yes	Yes for mental health, validated tool.	Yes	Yes	Yes – range of validated tools.	Yes
8. Was the follow up time reported and sufficient to be long enough for outcomes to occur?	Yes	Unclear – lockdown and restrictions were in transition during wave 2 data collection period April - July 2020.	Yes	Unclear – survey in April and May 2020 (acute phase of pandemic).	Yes	No – 12 week pre-lockdown data collection (01/01/20 - 22/03/20) vs. 14 post -lockdown (23/03/20 – 30/06/20), also not same time period potential	Unclear – data collected during June–July 2020.	Yes

						for seasonal effects.		
9. Was follow up complete, and if not, were the reasons to loss to follow up described and explored?	No – mentions missing or incomplete data	No – only 35% provided data during/post-lockdown compared to pre-lockdown.	Not applicable	No – around 50%.	Yes	Yes	Yes – minimal number that had missing data for one or more covariates (2.5%).	Yes
10. Were strategies to address incomplete follow up utilized?	No	No	Not applicable	No	Yes - disability status missing for 3.2% Census returns which was imputed.	Not applicable	Not applicable	Not applicable
11. Was appropriate statistical analysis used?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Overall appraisal</b>	Most aspects met but not detail on how ID diagnosis ascertained and issues with completeness of data.	A number of aspects not met.	Most aspects met but no demographic data on those actually presenting to optometry or ophthalmic outpatients and no exploration of covariates.	Most aspects met but note some differences between groups, self-reported disability status and only approximately 50% completed surveys.	Majority of aspects met but lack of demographic details and disability status was self-report from 2011 Census.	Most aspects met but no demographic data on those having consultations, no exploration of covariates and data collections periods varied.	Most aspects met but note differences between groups, self-reported disability status self-reported, data collection period might not be appropriate.	Majority of aspects met but sample might be under represented.

### Cross-sectional studies

Questions	Naylor 2020	Theis 2021
1. Were the criteria for inclusion in the sample clearly defined?	Yes – see ‘participants’.	No – none provided, link to online survey provided via various means including social media.
2. Were the study subjects and the setting described in detail?	Yes – demographics, location and time period provided.	No - No demographic data on socio-economic status or ethnicity provided.
3. Was the exposure measured in a valid and reliable way?	Yes - COVID-19 pandemic.	Yes – COVID-19 pandemic
4. Were objective, standard criteria used for measurement of the condition?	Yes	Yes
5. Were confounding factors identified?	No – only age specifically considered, and some effect measured, didn’t look at other medical conditions or experience with technology.	No
6. Were strategies to deal with confounding factors stated?	No – not fully only age effect measured.	No
7. Were the outcomes measured in a valid and reliable way?	No – self-reported scales but exploring ‘perceived’ effects.	No – subjective using Likert scale not validated.
8. Was appropriate statistical analysis used?	Yes	No - confounding factors not explored.
9. <b>Overall appraisal</b>	Most aspects met but confounding not explored and outcome measures were self-reported.	Most aspects <b>not</b> met.

**Mixed methods studies – using Mixed Methods Appraisal Tool (MMAT), version 2018**

Category of study designs	Methodological quality criteria	Greenway & Eaton-Thomas 2020	Paulauskaite 2021	Rawlings 2021	Wolstencroft 2021
Screening questions (for all types)	S1. Are there clear research questions?	Yes	Yes <i>Experiences of the pandemic.</i>	Yes	Yes <i>Clear aims and objectives.</i>
	S2. Do the collected data allow to address the research questions?	Yes	Yes <i>Survey with open and closed questions.</i>	Yes	Yes <i>Understanding experience.</i>
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?	Yes	Yes <i>Investigating experiences</i>	Yes	Yes <i>Interviews used to understand experience.</i>
	1.2. Are the qualitative data collection methods adequate to address the research question?	Yes <i>Note ethics approval given.</i>	Yes <i>Free text questionnaire responses. (Note ethics approval).</i>	Can't tell, <i>no details.</i>	Yes <i>Telephone interviews. Recorded and transcribed. (Note ethics approval given).</i>
	1.3. Are the findings adequately derived from the data?	Yes <i>Content analysis. 10% double coded.</i>	Yes <i>Inductive content analysis. Two raters with good kappa agreement.</i>	Can't tell, <i>no details.</i>	Yes <i>Reflective thematic analysis.</i>
	1.4. Is the interpretation of results sufficiently substantiated by data?	Yes <i>Quotes support the codes/themes.</i>	Yes <i>Yes, but note themes rather than counts presented.</i>	Yes	Yes <i>Quotes support themes.</i>
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?	Yes	Yes	Yes	Yes

2. Quantitative randomized controlled trials	Not applicable				
3. Quantitative non-randomized	Not applicable				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?	Yes <i>Self-selected sample.</i>	Yes <i>But could be biased due to invited Ps already taking part in an RCT.</i>	Yes <i>Very small sample but a difficult population to sample.</i>	Yes <i>Relevant sample, consecutive sampling due to time restrictions.</i>
	4.2. Is the sample representative of the target population?	Can't tell <i>Population characteristic not given. Inclusion criteria not stated.</i>	Unclear <i>Population characteristics not given. Authors note that sample represents the trial sample (from which they were recruited), hence findings may not represent Black, Asian and minority ethnic groups.</i>	Yes <i>Small sample but authors note representative of clients suitable.</i>	Unclear <i>Target population not described in detail.</i>
	4.3. Are the measurements appropriate?	Yes <i>Questions adapted from previously published survey. Not stated if validated (no composite scores).</i>	Yes <i>But note, non-validated measure.</i>	Yes <i>Self-report for sensory ability and current use of technology.</i>	Yes <i>SDQ and HADS are validated. Other questionnaires previously used/published.</i>
	4.4. Is the risk of nonresponse bias low?	No <i>Self-selected sample. Authors note there may be response bias, especially parents of children with more severe SENDs.</i>	Unclear <i>Reasonable response rate, but no details of reason for non-response given.</i>	Yes <i>Adequate for nature of study.</i>	Unclear <i>Unclear how many participants invited.</i>
	4.5. Is the statistical analysis appropriate to answer the research question?	Yes <i>Chi-square goodness of fit and independence used.</i>	Yes <i>descriptive statistics only. But note, percentages calculated excluding missing data.</i>	Yes <i>Descriptive statistics.</i>	Yes <i>Descriptive statistics.</i>

5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	Can't tell <i>Justification for mixed methods not given.</i>	Unclear <i>Justification for mixed methods not given.</i>	Yes <i>Qual data used to augment and compliment findings to assess accessibility and acceptability.</i>	Yes
	5.2. Are the different components of the study effectively integrated to answer the research question?	Yes <i>Qualitative results elaborate on quantitative responses.</i>	Yes <i>Results seem to be reported together in places.</i>	Yes	Yes <i>Qualitative analyses expand upon quantitative findings, but perhaps limited integration.</i>
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	Yes <i>Results are presented together.</i>	Yes <i>But further details needed on where the quotes were taken from to support the quantitative results.</i>	Yes	Yes
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	Can't tell <i>None particularly highlighted.</i>	Unclear <i>None particularly highlighted.</i>	Yes	Unclear <i>Only consistencies noted.</i>
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	Can't tell <i>Mostly they do (see above).</i>	Unclear <i>Mostly yes, but more detail needed.</i>	<i>Low quality due to sample size which was limited by number of people who were suitable to communicate via telephone for the survey and very brief details of how qualitative data was recorder, supplementary material was not accessible.</i>	Unclear <i>Can't tell on some aspects.</i>



### Qualitative studies – using CASP checklist

Questions	Abrar 2021	Ashbury 2021	Cooper-Kenny & Riddell 2021	Patel 2021	Shakespeare 2021
1. Was there a clear statement of the aims of the research?	Yes	Yes	Yes	Yes	Yes
2. Is a qualitative methodology appropriate?	Yes	Yes	Yes	Yes	Yes
3. Was the research design appropriate to address the aims of the research?	Yes	Can't tell	Yes	Yes	Yes
4. Was the recruitment strategy appropriate to the aims of the research?	Yes	Can't tell	Can't tell	Yes	Yes
5. Was the data collected in a way that addressed the research issue?	Yes	Can't tell	Can't tell	Yes	Can't tell
6. Has the relationship between researcher and participants been adequately considered?	Can't tell	Can't tell	Can't tell	Yes	Can't tell
7. Have ethical issues been taken into consideration?	Yes	Yes	Can't tell	Yes	Can't tell
8. Was the data analysis sufficiently rigorous?	Yes	Yes	Can't tell	Yes	Can't tell
9. Is there a clear statement of findings?	Yes	Yes	Yes	Yes	Yes
10. How valuable is the research?	No new areas where research is needed is discussed. The findings can be used to	Some suggestions made of what should be prioritised for intervention/support. A sibling paper (part of the same larger	Considered in policy/legal context. Further research suggested.	The study discusses wider implications for further research. In addition, the	Discusses wider implication of research and limitations such as only England and Scotland and few people from Black

	<p>develop strategies to improve patient care. The authors point out to be cautious when trying to generalise the study findings to other population of patients affected by cancellation or postponement of elective surgical procedures.</p>	<p>study) referred to that specifically asked about support needs. Limitation of no comparison group of neurotypical children and families was noted.</p>		<p>study findings which have the potential to inform future care plans for adults with learning impairment and their carers.</p>	<p>and Minority Ethnic groups or care homes (thus implying further research needed). Policy recommendations made.</p>
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## **11. ADDITIONAL INFORMATION**

### **7.1 Conflicts of interest**

The authors declare they have no conflicts of interest to report.

### **7.2 Acknowledgements**

The authors would like to thank the Stakeholders; Steven Macey, Rosemary Iles, Emma Bennett and Heather Payne from Welsh Government, and members of the Wales COVID-19 Evidence Centre for their advice and guidance.

## 12. ABOUT THE WALES COVID-19 EVIDENCE CENTRE (WCEC)

The WCEC integrates with worldwide efforts to synthesise and mobilise knowledge from research.

We operate with a core team as part of [Health and Care Research Wales](#), are hosted in the [Wales Centre for Primary and Emergency Care Research \(PRIME\)](#), and are led by [Professor Adrian Edwards of Cardiff University](#).

The core team of the centre works closely with collaborating partners in [Health Technology Wales](#), [Wales Centre for Evidence-Based Care](#), [Specialist Unit for Review Evidence centre](#), [SAIL Databank](#), [Bangor Institute for Health & Medical Research/ Health and Care Economics Cymru](#), and the [Public Health Wales Observatory](#).

Together we aim to provide around 50 reviews per year, answering the priority questions for policy and practice in Wales as we meet the demands of the pandemic and its impacts.

**Director:**

Professor Adrian Edwards

**Contact Email:**

[WC19EC@cardiff.ac.uk](mailto:WC19EC@cardiff.ac.uk)

**Website:**

<https://healthandcareresearchwales.org/about-research-community/wales-COVID-19-evidence-centre>

## 13. APPENDIX

Searching completed for Rapid Scoping Review.

### 9.1. Database Searches

Medline search strategy & database search results

Ovid MEDLINE(R) ALL <1946 to November 12, 2021>

1	exp Disabled Children/	6714
2	exp Disabled Persons/	69626
3	Learning Disabilities/	14432
4	Developmental Disabilities/	21443
5	Intellectual Disability/	57089
6	Visually Impaired Persons/	2618
7	exp Deafness/	28428
8	(developmental adj3 disabilit*).tw.	7307
9	"physical* impair*.tw.	2776
10	(disabled adj3 pe*).tw.	4636
11	(disab* adj3 child*).tw.	11816
12	((intellectual or learning or developmental) adj3 disabilit*).tw.	34104
13	(deaf* or ((visual* or hear*) adj3 (diabilit* or impair*))).tw.	71942
14	or/1-13	252363
15	exp COVID-19/	118500
16	(COVID* or coronavirus* or corona* virus* or coronavirus* or corono* virus* or coronavirinae* or corona* virinae* or Cov or "2019-nCoV*" or 2019nCoV* or "19-nCoV*" or 19nCoV* or nCoV2019* or "nCoV-2019*" or nCoV19* or "nCoV-19*" or "HCoV-19*" or HCoV19* or "HCoV-2019*" or HCoV2019* or "2019 novel*" or Ncov* or "n-cov" or "SARS-CoV-2*" or "SARSCoV-2*" or "SARSCoV2*" or "SARS-CoV2*" or SARSCov19* or "SARS-Cov19*" or "SARSCov-19*" or "SARS-Cov-19*" or SARSCov2019* or "SARS-Cov2019*" or "SARSCov-2019*" or "SARS-Cov-2019*" or SARS2* or "SARS-2*" or SARScoronavirus2* or "SARS-coronavirus-2*" or "SARScoronavirus 2*" or "SARS coronavirus2*" or SARScoronavirus2* or "SARS-coronavirus-2*" or "SARScoronavirus 2*" or "SARS coronavirus2*" or "severe acute respiratory syndrome*).tw.	206770
17	15 or 16	212160
18	exp United Kingdom/	380496
19	(national health service* or nhs*).ti,ab,in.	231522
20	(english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab.	42399
21	(gb or "g.b." or britain* or (british* not "british columbia") or uk or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jw,in.	2243630
22	(bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or	

leeds\* or leicester or "leicester's" or (lincoln not nebraska\*) or ("lincoln's" not nebraska\*) or (liverpool not (new south wales\* or nsw)) or ("liverpool's" not (new south wales\* or nsw)) or ((london not (ontario\* or ont or toronto\*)) or ("london's" not (ontario\* or ont or toronto\*)) or manchester or "manchester's" or (newcastle not (new south wales\* or nsw)) or ("newcastle's" not (new south wales\* or nsw)) or norwich or "norwich's" or nottingham or "nottingham's" or oxford or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salford or "salford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts\* or boston\* or harvard\*)) or ("worcester's" not (massachusetts\* or boston\* or harvard\*)) or (york not ("new york\*" or ny or ontario\* or ont or toronto\*)) or ("york's" not ("new york\*" or ny or ontario\* or ont or toronto\*))))).ti,ab,in. 1563313

23 (bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in. 62299

24 (aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia\*) or ("perth's" not australia\*) or stirling or "stirling's").ti,ab,in. 230903

25 (armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in. 29649

26 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 2817874

27 (exp africa/ or exp americas/ or exp antarctic regions/ or exp arctic regions/ or exp asia/ or exp australia/ or exp oceania/) not (exp United Kingdom/ or europe/) 3113068

28 26 not 27 2674795

29 14 and 17 and 28 147

30 limit 29 to yr="2019 - 2022" 146

Database	Date searched	Results retrieved	No. imported into Endnote
Medline	16/11/21	146	143
PsycInfo	16/11/21	37	16
Collabovid	19/11/21	4	1
Total		<b>187</b>	
Total after Deduplication			<b>159</b>

## 9.2 Supplementary Searching resources

<b>Organisation websites known to Stakeholders</b>
1. Care Quality Commission
2. <a href="http://www.gov.uk">Department of Health and Social Care - GOV.UK (www.gov.uk)</a>
3. The Health Foundation
4. Public Health Wales
5. Inclusion London
6. RNIB Cymru
7. disability@work
8. Scope
9. Disability Benefits Consortium
10. Autistica

11. Downs Syndrome Association
12. Mencap
13. Disability Wales
14. National Autistic Society
15. Sense
16. Leonard Cheshire
17. Alzheimer's Society
<b>Evidence captured from RES</b>
1. Care Quality Commission (2021). <a href="#">The state of health care and adult social care in England 2020/21</a> .
2. Brennan C. (2020). <a href="#">Disability rights during the pandemic. A global report on findings of the COVID-19 Disability Rights Monitor</a>
3. Allen, R. et al. 2021 <a href="#">UK Disability Survey research report, June 2021</a>
4. Watkins A. (2021) <a href="#">COVID-19-related deaths in Wales amongst People with Learning Disabilities from 1st March to 19th November 2020</a> Public Health Wales Published January 2021
5. Willatt A., Jones D.P., Kyle, R.G., Davies, A.R. (2021). <a href="#">Emerging Drivers of Vulnerability to Health Inequity in the Context of COVID-19: Perspectives and response from the Voluntary and Community Sector in Wales</a> . Cardiff: Public Health Wales. Published July 2021
6. <a href="#">COVID-19 Shielders: Left Adrift – Jan 2021</a> Published January 2021
7. Inclusion London. (2021). <a href="#">Locked down and abandoned: disabled people's experiences of COVID-19</a>
8. Office for National Statistics (2021) <a href="#">Coronavirus and the social impacts on disabled people in Great Britain:</a>
9. Moss G, Bradbury A, Harmey S, Mansfield R, Candy B, France R, Vigurs C (2021) <a href="#">Mitigating impacts of the COVID-19 pandemic on primary and lower secondary children during school closures: a rapid evidence review</a> . London: EPPI Centre, UCL Social Research Institute, University College London.
10. <a href="#">Evidence briefing for WG locked out report</a>
11. Suleman, Mehrunisha, et al. (2021). <a href="#">Unequal pandemic, fairer recovery</a> . The Health Foundation. Published July 2021
<b>Other evidence identified from protocol development to consider for including into ScR</b>
<a href="#">Then There Was Silence. The Impact of the Pandemic on Disabled Children, Young People, and their Families.</a>
Kirkby, J., Ashworth, E., Bray, L. and Alghrani, A., 2021. <a href="#">A Rapid Scoping Review-The Impact of the COVID-19 Pandemic on the Education, Health and Social Care Provision for Children with Special Educational Needs and Disabilities (SEND)</a> .
Ashworth, E., Kirkby, J., Bray, L. and Alghrani, A., 2021. <a href="#">The Impact of the COVID-19 Pandemic on the Education, Health and Social Care Provision for Children with Special Educational Needs and Disabilities (SEND): The Ask, Listen, Act Study</a>

### 9.3. Guidelines searches

Date of Search 29 <sup>th</sup> November to 2 <sup>nd</sup> December 2021		
Source	Results (n=92 before deduplication)	Search terms
NICE	2	Disability Disabilities Disabled Disable

		Searched 2019 – 30/11/21
<u>SIGN</u>	1 duplicate	disable AND COVID disabilities AND COVID disabled AND COVID disability AND COVID
<u>Social care online</u>	37: exported, 15 screened at Title/Abstract, 9 screened at Full text. 0 included.	guidance AND disable AND COVID guidance AND disabilities AND COVID guidance AND disabled AND COVID guidance AND disability AND COVID
<u>Trip</u>	52 only 2 – both duplication with NICE	guidance AND disable AND COVID guidance AND disabilities AND COVID guidance AND disabled AND COVID guidance AND disability AND COVID