

# **Report of the Director of Research, Bradford Institute for Health Research to the meeting of the Bradford and Airedale Health and Wellbeing Board to be held on 25<sup>th</sup> August 2020**

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## **Subject:**

**Lessons learned from the Bradford District COVID-19 Scientific Advisory Group (C-SAG) March 2020 – July 2020.**

## **Summary statement:**

**This report presents key learning from the Bradford District COVID-19 Scientific Advisory Group regarding the COVID-19 pandemic for the period March 2020 – July 2020. It provides an overview of both planned and ongoing activities which will continue to support and inform the District response and recovery.**

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## **Portfolio:**

**Health People and Places**

## **Overview & Scrutiny Area:**

**Health and Social Care**

## 1. SUMMARY

- Members of the Wellbeing Board are asked to note the learning from the first four months of the Bradford District COVID-19 Scientific Advisory Group (C-SAG) and both current and planned activities which will continue to support and inform the District response to and recovery from the COVID-19 pandemic.

### **Key Finding:**

**Our findings have collectively highlighted the wide range of impacts that the pandemic is having on the population of the Bradford District, that these impacts are not being experienced equally and that some of the least advantaged in society are amongst those most affected. There is a need to reduce the underlying risk from COVID-19 with a renewed focus on prevention.**

## 2. BACKGROUND

- In response to the COVID-19 pandemic the COVID-19 Scientific Advisory Group (C-SAG) was established for the Bradford District at the end of March 2020. The purpose of the group has been to add value to the District response to and recovery from COVID-19 by collecting and synthesising data and evidence into intelligence, tailored to Bradford District, in a co-ordinated and collaborative manner.
- To achieve this the group has sought to maximise available skills, resources and data infrastructure. The group has been led by Bradford Institute for Health Research (BIHR) on behalf of local partners, harnessing existing research expertise and infrastructure within the response efforts. C-SAG represents the collective efforts of two groups:
  - i. A multi-agency group (Multi-Agency C-SAG) with participants from Bradford Institute for Health Research (BIHR), Bradford Metropolitan District Council (BMDC), Bradford District and Craven Clinical Commissioning Group (CCG) and Bradford District Care Trust (BDCT). The group is multi-disciplinary in nature with participants having varied backgrounds including clinical, data and intelligence, policy making, population health management, public health, research, strategy, transformation and change.
  - ii. A BIHR group of researchers, analysts, clinicians and public health specialists from BIHR hosted programmes and the University of York, University of Leeds and Queen Mary University London.
- C-SAG initially reported to and received tasking via the Health and Care Gold group and latterly District Gold. C-SAG has been represented on these groups by the BIHR's Director of Research.

### 2.1 C-SAG focus areas

- C-SAG has sought to contribute and support the response across four broad areas or workstreams, with a fifth workstream to recognise the role of underpinning data infrastructure. These and a summary of associated collaborations and outputs are shown in Figure 1.

<b>Workstream 1</b> Supporting defining and identifying vulnerable groups	<b>Workstream 2</b> Supporting immediate District resilience planning for COVID-19	<b>Workstream 3</b> Assessing family and community impacts associated with COVID-19	<b>Workstream 4</b> Assessing and modelling indirect impacts of COVID-19.	<b>Workstream 5</b> Harnessing Connected Data to support the District response to COVID-19
<b>Scope:</b> To support Bradford Council in the definition and identification of vulnerable groups through research insights, intelligence and connected data.	<b>Scope:</b> To undertake and identify emerging trends of COVID-19 patients in the District and support health and care service resilience planning.	<b>Scope:</b> To assess the immediate and longer term family and community impacts associated with COVID-19 and related measures	<b>Scope:</b> To assess and model the wider, indirect impacts of COVID-19 on healthcare and our populations, providing early intelligence to inform proactive response and recovery.	<b>Scope:</b> To facilitate access to and sharing of data and development of connected data, supporting other C-SAG workstreams and the wider response and recovery.
<b>Impact</b> <ol style="list-style-type: none"> <li>1. Vulnerable Groups subgroup led by Bradford Council</li> <li>2. Principles for prioritising vulnerable groups and recovery</li> <li>3. Child wellbeing analysis</li> <li>4. Detailed analysis of groups vulnerable to wider health, social and economic impacts of COVID-19</li> </ol>	<b>Impact</b> <ol style="list-style-type: none"> <li>1. Collective decision making re: COVID-19 modelling</li> <li>2. COVID-19 model outputs</li> <li>3. Support for dashboard and situation report development</li> <li>4. Planning and intelligence leads sub group</li> <li>5. Collation and synthesis of shared intelligence</li> <li>6. Support for system resilience planning</li> <li>7. Epidemiological profile of COVID-19 in-patients</li> <li>8. Ethnicity and COVID-19 report and review</li> <li>9. Analysis of excess deaths</li> <li>10. Shielded populations</li> <li>11. Analysis of shielded population</li> <li>12. Schools webinar</li> </ol>	<b>Impact</b> <ol style="list-style-type: none"> <li>1. Shaping of Born in Bradford research agenda by partners</li> <li>2. Establishment of a Community Soft Intelligence Group</li> <li>3. Report of key issues noted across various communities in response to initial lockdown</li> <li>4. Preliminary findings of the first 1000 participants in the Born in Bradford parents survey (+webinar)</li> </ol>	<b>Impact</b> <ol style="list-style-type: none"> <li>1. Shaping of medium and longer term research agenda by partners</li> <li>2. Analysis of changing trends in Accident and Emergency attendance (x2)</li> <li>3. Analysis of changing trends in children and young people's Accident and Emergency attendance (x2)</li> <li>4. Analysis of change in admissions from stroke and heart attack</li> </ol>	<b>Impact</b> <ol style="list-style-type: none"> <li>1. Expansion of Connected Bradford linked data for over 1.4 million people with further agreements in place or developing with regards to housing, education, ambulance and acute trust data sharing</li> </ol>

Figure 1 – C-SAG Workstreams March 2020-July 2020

- Whilst the workstream structure has provided a broad framework for managing C-SAG activities, many of the analyses and findings are cross cutting in nature and to reflect this, summary findings in this report are structured with reference to key issues and areas. A full list of outputs can be found in Appendix 1 with links included to those published on the C-SAG website. Further COVID-19 related research at Bradford Teaching Hospitals Foundation Trust (BTHFT) of relevance to the District is also noted.

## 2.2 COVID-19 AND IMPACTS ON PEOPLE FROM BLACK, ASIAN AND MINORITY ETHNIC (BAME) BACKGROUNDS

- COVID-19 has disproportionately affected people from BAME backgrounds
- Early in the pandemic C-SAG responded to requests from Gold to provide insight into the impacts and outcomes for people from BAME backgrounds in response to local concerns regarding potentially disproportionate impacts. At the time, limited data were available, a [briefing](#) was provided based on inpatient data from BTHFT (Figure 2) and later complemented by a [review](#) of emerging national evidence.

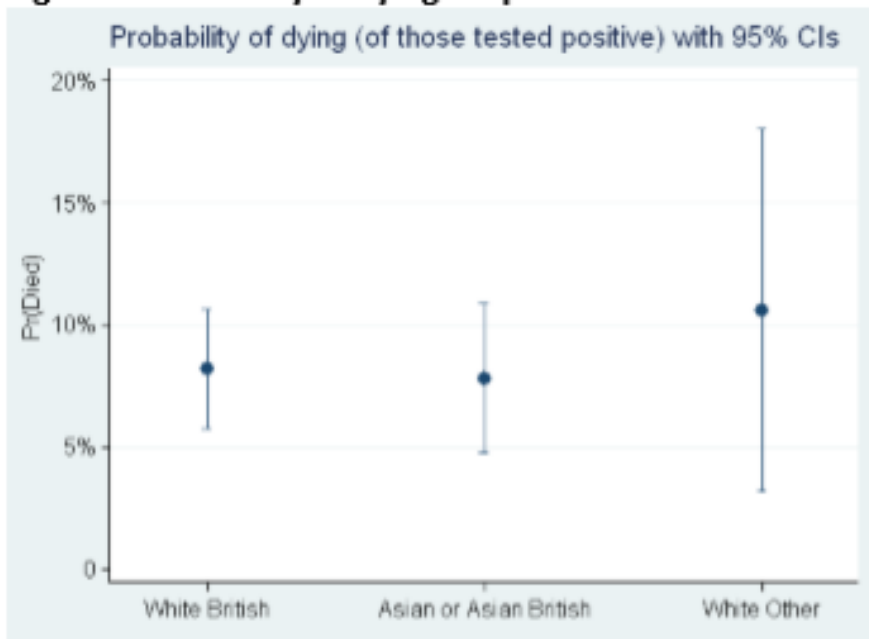


Figure 2 – Probability of dying for patients who tested positive for COVID-19 (from [C-SAG briefing paper April 2020](#))

- Public Health England have since published a [national review](#) into disparities in risk and outcomes including by ethnicity and concluded that people from BAME have a higher risk of poorer outcomes including death, from a COVID-19 infection, after accounting for other important factors e.g. socio-economic status, occupation etc.
- Poor and/or incomplete recording of ethnicity has restricted analysis and therefore understanding
- [Analysis](#) has shown that a higher proportion of individuals resident in the District were advised to shield were from BAME backgrounds (37% BAME with ethnicity recorded and 63% White British) compared with the District population (31% BAME and 69% White British). Opportunities to review deaths, beyond the hospital setting, by ethnicity have been restricted by the absence of data as ethnicity is not recorded within the

death registration process. C-SAG has contributed [findings](#) to the independent review into the impact of COVID-19 on health inequalities and support needed for BAME communities and staff commissioned by West Yorkshire and Harrogate Health and Care Partnership (WYHHCP). The need for all organisations to commit to better and consistent recording of ethnicity and to update missing and inaccurately recording of ethnicity so as to be better able to identify, understand and address these inequalities was a priority area included in this submission.

- Ongoing C-SAG activities
- Data on COVID-19 testing from Pillar 1 and Pillar 2 is currently being uploaded to GP records by the system provider. When complete, it will provide the opportunity for further analysis of COVID-19 and associated outcomes, with analysis by factors such as ethnicity possible.
- While admissions to BTHFT for COVID-19 have significantly reduced, analysis continues to be undertaken to monitor attendance, admission and outcome patterns including by age, gender, ethnicity and socio-economic status.
- In collaboration with WYHHCP, further in-depth analysis of patients admitted to hospital with COVID-19 across the region is currently underway to understand the role of other factors such as co-morbidities. Ethnicity will be a factor considered in this analysis with data being collected from participating trusts through both automated processes and clinician review of patient records.

## **2.3 HEALTH SERVICES AND EXCESS DEATHS**

- It is too early to identify what the impacts of changes in health and care service provision, access and use due to the pandemic have had on the health of the population of the District
- In response to concerns about increases in deaths experience during the early weeks of the pandemic, Council Public Health colleagues worked with Registration Services to review available data. There were emerging concerns that increases in deaths could be associated with individuals avoiding care for fear of contracting COVID-19. The [review](#) identified increases in deaths attributed to respiratory, other causes and COVID-19 with cardiovascular, cancer and dementia deaths similar to the previous year.
- Subsequent [analysis](#) of Accident and Emergency attendances at BTHFT for April found a 54% reduction (higher than the national average) across all non COVID-19 attendance types, severity of categorisations and age ranges. Updated [analysis](#) showed a 35% and 24% reduction for May and June respectively (Figure 3) compared to the previous year, indicating demand is returning though not uniformly across conditions.

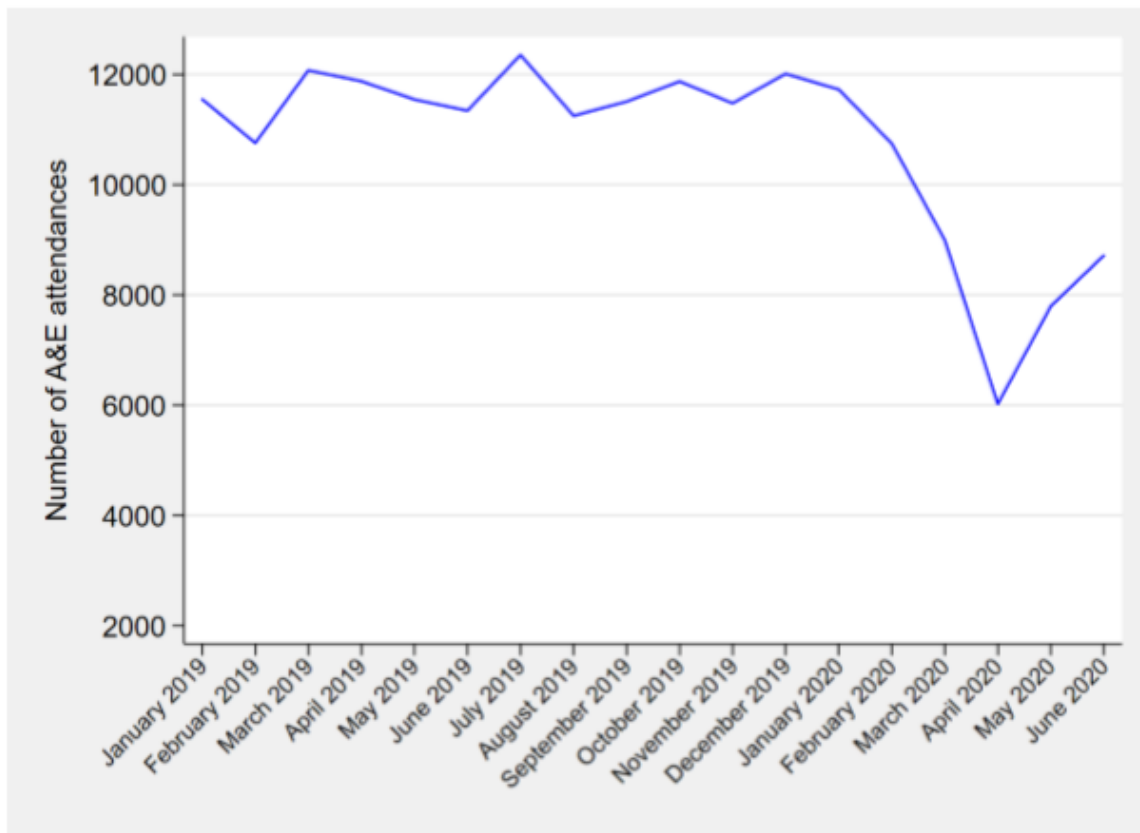


Figure 3 – Number of accident and emergency attendances at Bradford Royal Infirmary between 1<sup>st</sup> January 2019 and 30<sup>th</sup> June 2020 (from [C-SAG briefing paper](#) July 2020)

- [Analysis](#) of admissions for myocardial infarctions and strokes at BTHFT showed that they were lower during the first 8 weeks of lockdown but have since returned to levels seen in previous years.
- Despite reductions in attendances, health anxieties were clearly evident in the [preliminary findings](#) of the first 1000 responses to the Born in Bradford (BiB) parents survey with 2 in 5 participants reporting worrying about their health most or all of the time, and were more likely to be worried if they lived in a household with someone who was shielding or clinically vulnerable.
- [Ongoing C-SAG activities](#)
- Opportunities to understand the potential longer-term impacts of the pandemic on non-COVID-19 health conditions, to inform the District response, are being explored in conjunction with partners at WYHHCP, Public Health England, Leeds Institute of Data Analytics and the Turing Institute.

## 2.4 MENTAL HEALTH

- [Poorer mental health outcomes are shared concern](#)
- Concerns about the mental health impacts of the pandemic, lockdown measures and associated consequences e.g. employment security were evident in conversations with communities as part of the development of the community soft intelligence [report](#). In the [analysis](#) of Accident and Emergency data, the least reductions were seen in attendances for mental health related conditions, likely reflecting the overall increase in

prevalence and severity of these conditions in the population associated with the pandemic. Within the [preliminary findings](#) of the BiB parents survey, 2 in 5 respondents had depression and 2 in 5 had anxiety (Figure 4), with the risk being higher for those struggling financially and for White British respondents. Findings have contributed to a series of [mental health needs assessments](#) produced by Bradford Council Public Health colleagues and Public Health England as using C-SAG findings to inform a spotlight report on BAME mental health.

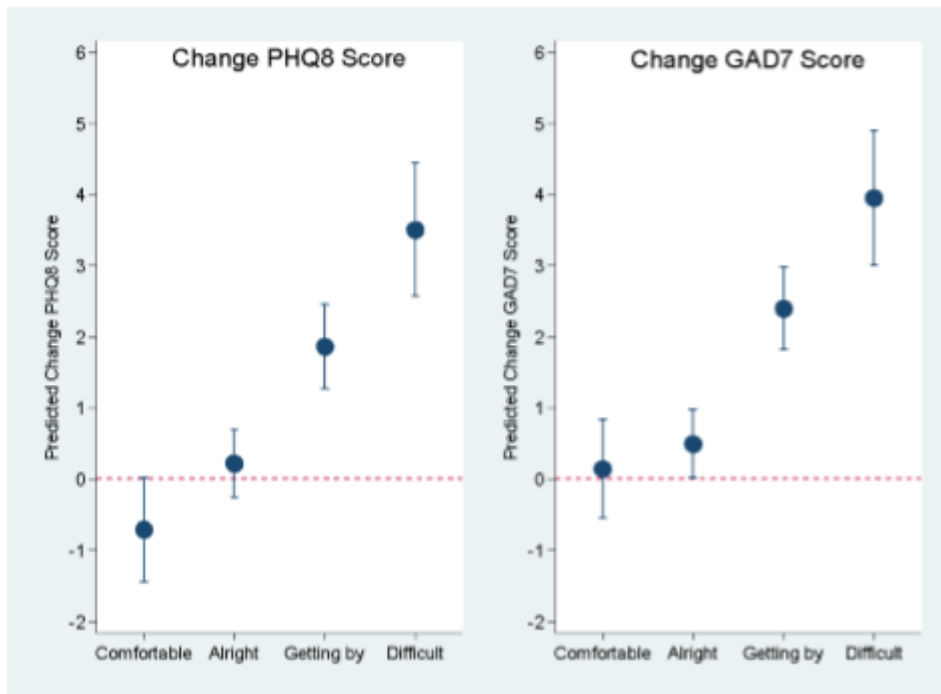


Figure 4 – Change in measures of depression (PHQ8) and anxiety (GAD7) amongst parents who responded to the Born in Bradford survey when comparing pre-COVID-19 to the lockdown period (from [Born in Bradford Preliminary Findings webinar](#) July 2020)

- Ongoing C-SAG activities
- Conversations continue with a view to linking from Bradford District Care Trust to the Connected Bradford linked database to enable analysis of mental health data and support better understanding of mental health in the District.
- Questions to ascertain the prevalence of common mental health conditions such as depression and anxiety will continue to be included in future rounds of the BiB surveys.

## 2.5 CHILDREN AND YOUNG PEOPLE

- The effects of the pandemic lockdown on children and young people is a shared concern of parents, communities and system partners
- Specific [analysis](#) of accident and emergency attendance by children and young people was undertaken to inform and support the service response after showing that reductions were greatest amongst this population. [Preliminary findings](#) from the BiB parent survey showed that 1 in 5 respondents lacked confidence in their ability to support their children's learning at home. Of children eligible for a school place during lockdown, only 16% took this up with the main reasons being that childcare was available at home and because of fears their child might catch the virus. Whilst further data is gathered and analysed, historic data and research provides important insights

and areas for action for example [analysis](#) of child wellbeing pre-pandemic (Figure 5). Data from the BiB research cohorts provide a baseline to better understand the impact of the pandemic itself.

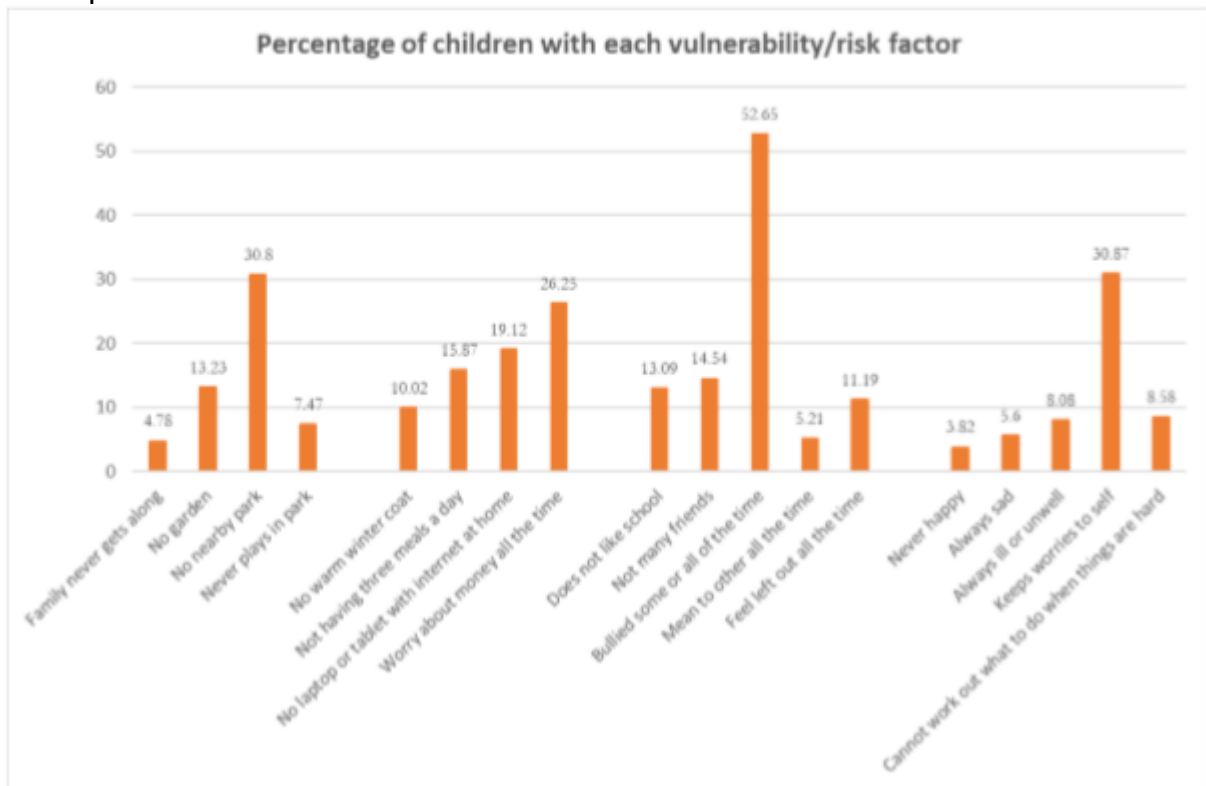


Figure 5 – Percentage children with each vulnerability/risk factor to wellbeing from Born in Bradford primary schools survey data (from [C-SAG briefing paper](#) June 2020)

- The Centre for Applied Education Research held a [webinar](#) linking school leaders with experts in public health, epidemiology, mental health and paediatrics; providing health and scientific advice and support with the challenges of restarting schools. CAER have also hosted a number of meetings with the Department for Education and Department for Health and Social Care providing insights into the impact of lockdown on children and young people.
- Ongoing C-SAG activities
- BiB have undertaken a [children's survey](#), with further rounds planned later in the year to help build a longitudinal understanding of the impacts of the pandemic. Data are currently being analysed for the first round with results available in the coming weeks.
- Further in-depth interviews will begin shortly to explore children's experience of lockdown and provide further insights to support the system response.
- CAER is contributing and supporting the educational response to the pandemic and is conducting a school survey with senior leaders and special educational need coordinators to capture the response to COVID-19, particularly in relation to vulnerable children, race and disadvantage.
- In parallel, CAER have been asked to lead a national project establishing an Electronic Vulnerability Index, using linked routine data to identify and coordinate service delivery for children at risk. This will build on an existing model developed for Bristol City Council.
- CAER have organised further webinars and supporting materials for schools at the end of August and September to support the return of children to educational settings.



- Obesity has been linked to a greater risk of serious illness and death from COVID-19. Prevention of obesity at all ages is important not just for COVID-19 but for other health conditions too. In response to anecdotal reports of potential increases in child obesity related to the lockdown, a funding bid for a follow-up round of the Child Measurement Programme is being developed to help assess changes and explore any inequalities which may arise.

## 2.6 WIDER IMPACTS ON FAMILIES AND COMMUNITIES

- The pandemic and lockdown restrictions are not being experienced equally and for many are having adverse consequences which could be long lasting
- [Conversations](#) with community representatives during the early lockdown period, highlighted both shared and differing challenges during the early lockdown period. For example, many reported concerns regarding exacerbation of existing financial insecurity and poverty but these concerns were driven by different factors such as difficulties in accessing government support, concerns about access to free school meals or not being eligible for benefits/support due to employment type.
- Within the [preliminary findings](#) of the BiB parents survey, 1 in 10 had severe financial and food insecurities and reported being worried about losing their home and having to skip meals because there wasn't enough food. Those who were struggling financially and/or having depression or anxiety were repeatedly associated with other negative outcomes. These respondents were more likely to have health anxiety, do less physical activity, be less confident in supporting their childrens' home learning, have a poor relationship with their partner and be socially isolated.
- As a consequence of changes in income there is a risk that new families will be pushed into poverty, especially those furloughed (49% reported being worse off than before pandemic) and those self-employed but not working (69% reported being worse off than before pandemic).
- Conversely whilst loneliness was an issue for some older people, most participants from the Bradford District in the CARE75+ research cohort reported good health with low levels of health anxiety, anxiety and depression.
- The collective findings evidence that the impacts of the pandemic are wide ranging, affecting individuals in different ways, bringing into sharp relief and potentially worsening existing inequalities.
- In response to emerging concerns around impacts and inequalities C-SAG developed [guiding principles](#) for minimising the impact of lockdown exist on vulnerable groups and wider inequalities. This has been further developed into a comprehensive [report](#) which provides detail on groups vulnerable to the wider health, social and economic impacts of the pandemic in the District (Figure 6), defining and quantifying groups and associated control and mitigation measures.

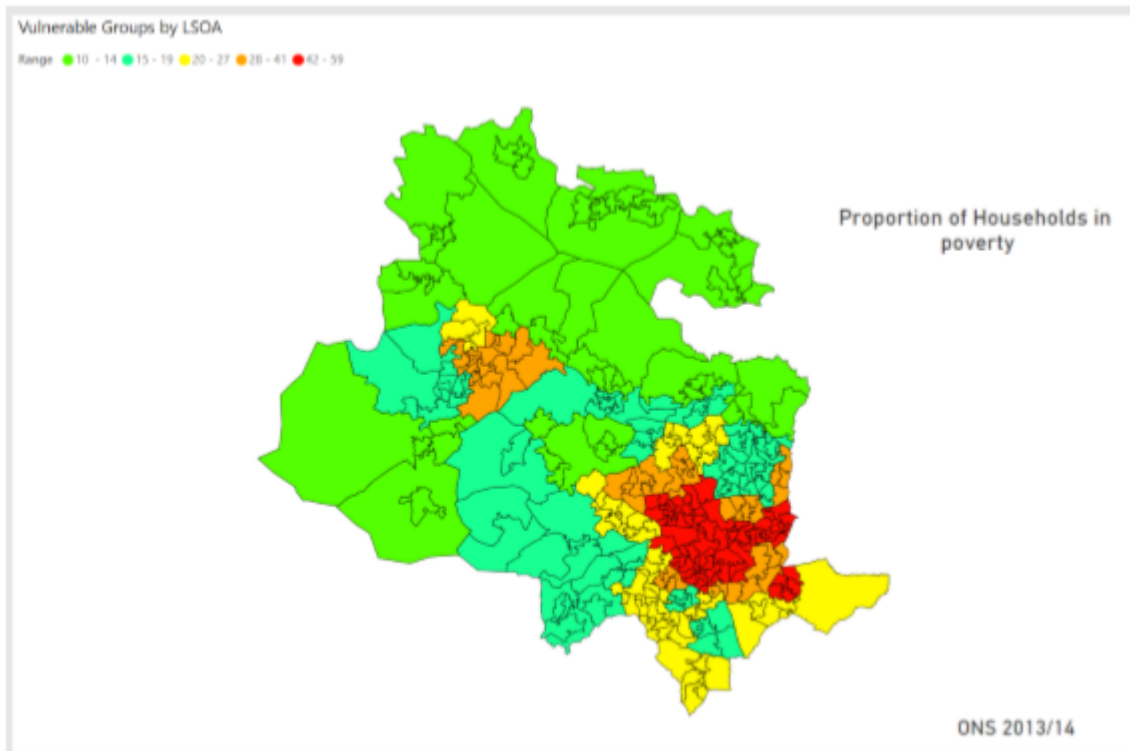


Figure 6 – Mapping vulnerable groups, proportion of households living in poverty (from [C-SAG briefing paper](#) June 2020)

- Ongoing C-SAG activities
- BiB are currently undertaking the final analysis of the first round of the parents survey with further rounds planned over the course of the coming year to help build an understanding of the longer term impacts of the pandemic. Further surveys have been deployed focussing on the experience of pregnant women during the pandemic period with follow-up surveys planned post pregnancy over the course of the coming year.
- BiB will be engaging with partners and the public regarding the final results to support the translation of intelligence from the suite of surveys into action with a focus on prevention and reducing inequalities, linking with established programmes and groups as relevant.
- A Community Soft Intelligence group, bring together community engagement expertise from the CCG, Council, Health Watch, Community and Voluntary Sector and BIHR has been established to support collaboration regarding community engagement activities and to maximise use of the insights that the public provide.

## 2.7 PERCEPTIONS OF THE PANDEMIC

- There are a wide range of beliefs and information sources being accessed about the pandemic – better understanding these beliefs has important implications for service provision and use
- Through anecdotal reports and engagement work with the community, we have identified are multiple perspectives and beliefs about the pandemic with particular hoax and fake news stories circulating identified in the community soft intelligence [report](#). Shared concern has also been expressed about young people's adherence to social

distancing requirements. Coupled with the high levels of health anxiety reported in the [preliminary findings](#) of the BiB parents survey, further research is being undertaken to explore these issues and provide appropriate evidence and insight to help services appropriately respond.

➤ Ongoing C-SAG Activities

- In depth interviews will begin shortly with a broad range of interviewees to explore health beliefs and also perceptions regarding a potential COVID-19 vaccine should one become available.
- The Community Soft Intelligence Group is currently synthesising further evidence to support understanding of perspectives and experiences of the pandemic across different communities in the District.

## **2.8 COLLABORATION AND SUPPORTING THE DISTRICT RESPONSE**

- A research ready city and collaboration of professionals from different disciplines and organisations has added value to the District response to COVID-19
- Positive working relationships between partners and research infrastructure, including Born in Bradford which is following the lives of 30,000 Bradford residents and Connected Bradford linked data, existed in the District prior to the emergence of COVID-19. The pandemic has catalysed a collective response seeking to tackle the challenges facing the District, harnessing unique assets, attributes and research infrastructure to provide insight and intelligence, informing the District response.
- BIHR has pooled internal expertise within its programmes and external expertise from the University of Leeds, University of York, Queen Mary University and Centre for Applied Education Research through the BIHR C-SAG.
- BiB research infrastructure has been repurposed enabling analysis by important factors such as ethnicity and further, the impacts associated with the pandemic to be determined by comparing findings with pre-pandemic baseline data.
- The Connected Bradford linked database has supported much of the analysis undertaken, provided data to support system resilience planning and is currently being upgraded to improve accessibility and usability for partners outside of BIHR.
- The multi-agency C-SAG has provided a forum in which professionals from different disciplines and organisations have collaborated, pooling data, skills and resources to address the challenges of the pandemic.
- In the initial stages of pandemic this included an [assessment](#) of COVID-19 models of potential COVID-19 cases, associated hospital and critical care demand and potential COVID-19 related deaths. This supported shared decision making as to which was most appropriate for use in the District as well as facilitating collaborations to develop relevant dashboards and situation reports. The group has also actively shaped the research undertaken through the BIHR C-SAG.
- Collectively both groups have not only responded to requests from Gold but also proactively identified emerging issues for consideration. Further, they have supported the work of individual organisations by sharing relevant intelligence, insights and professional expertise.
- C-SAG has secured external research funding from UK Research and Innovation to support the COVID-19 pregnancy surveys and interviews and jointly with Bradford Council funding from the National Institute for Health Research to scope requirements

for Local Authority research system.

- C-SAG has made contributions to local and regional system responses and findings have been submitted as written evidence to the House of Commons EFRA Committee on Covid-19, the Food Supply and Parliamentary Office of Science and Technology (POST) Survey of Experts to feed into the House of Lords Covid-19 Committee on medium- to long-term impact of Covid-19 on inequalities and the House of Commons Select Committee on Women and Equalities on gendered impact of the crisis on families on low incomes.
- Ongoing C-SAG activities
- Further research activity (Appendix 2), to inform the local response, has been scheduled for the coming months.
- The scope, function and membership of C-SAG and relationships to changed governance structures are currently being reviewed to ensure that C-SAG or a revised Scientific Advisory Group, continues to provide the necessary input into the next phase of the pandemic and beyond given that COVID-19 will profoundly shape lives, trajectories and outcomes for many years to come.

## **2.9 CLINICAL RESEARCH**

- Bradford has lived up to its reputation as a City of Research by being the largest recruiter of patients into COVID-19 clinical trials during the pandemic. We have recruited to 33 clinical trials and studies with almost 1000 patients recruited, half from BAME backgrounds so addressing the under-representation of BAME patients in clinical research. Vaccine trials are the next phase and we are working closely with system partners to establish these.
- Recent published [findings](#) include reducing intensive care demand through early use of continuous positive airway pressure (CPAP) treatment CPAP proning of COVID-19 patients.

### **2.9.1 COVID-19 Immune Response**

- One of the big areas of scientific uncertainty is how our immune systems respond to COVID-19 and how long we maintain immunity after infection. C-SAG is working with national experts to help answer these important questions. Through the UK COVID-19 Immune Consortium, a £5 million Medical Research Council programme, and a collaboration with national birth cohort studies we will be offering antibody testing to over 2000 families in the Born in Bradford study. We will be following up the positive cases with detailed B cell and T cell immune investigations to elucidate how our bodies remember and respond to coronavirus infection over time.
- We are also participating in the national SIREN study involving 10,000 NHS staff to monitor new COVID-19 infections (using antigen testing) and antibody testing to investigate subsequent immune responses.

### **2.9.2 Yorkshire Quality and Safety Research Group: Impact of COVID-19 response on staff**

- Aligned to C-SAG the Yorkshire Quality and Safety Research Group are conducting a study to capture the real-time experience of staff across all levels and settings to better understand how a healthcare organisation manages during a public health crisis.

Study findings will provide a rich case study that can be used within Bradford for future planning of such crises and add greatly to our understanding of how to support health system resilience.

## 2.10 SUMMARY AND NEXT STEPS

- In summary C-SAG has fulfilled its original purpose through:
  - i. Production of a significant number of outputs tailored to the Bradford District to support and inform local decision making, policy and practice in response to COVID-19 (Appendix 1)
  - ii. Submitting findings to regional and national calls for evidence, highlighting the challenges and circumstances faced in the Bradford District
  - iii. Providing a unique forum for multi-agency and multi-disciplinary collaboration, research agenda setting, data sharing, synthesis and problem solving
  - iv. Harnessing the unique local research infrastructure (including Born in Bradford and Connected Bradford) and through partnership working, ensured that current and future research addresses the needs of local policy and decision makers responding to both the direct and indirect impacts of the COVID-19 pandemic.
- Our findings have collectively highlighted the wide range of impacts that the pandemic is having on the population of the Bradford District, that these impacts are not being experienced equally and that some of the least advantaged in society are amongst those most affected. There is a need to reduce the underlying risk from COVID-19 with a renewed focus on prevention.
- We have a [recent BMJ editorial](#) highlighting the importance of non-communicable diseases in the context of COVID19 and call for greater urgency in addressing these. Our South Asian communities have 2-4 times the risk of diabetes and heart disease, and greater levels of central adiposity. We have shown in Born in Bradford how this risk begins in pregnancy and early life and that the causes lie in the wider determinants of health (housing, food systems, urban design, education, air quality, culture) far more than just individual behavioural choices. We need to be much more ambitious and braver in our efforts to redesign our complex systems (with supportive local policy and legislation) to provide health promoting environments and harness the creativity of our communities in doing so.
- There is enthusiasm and commitment to providing a sustainable scientific advisory function for the District. We have submitted proposals for an ActEarly North Institute to the West Yorkshire Combined Authority which we hope will ensure we can build on and continue our collaboration and research.
- Next steps
- The scope, function and membership of C-SAG and relationships to changed governance structures are currently being reviewed to ensure that C-SAG or a revised Scientific Advisory Group, continues to provide the necessary input into the next phase

of the pandemic and beyond given that COVID-19 will profoundly shape lives, trajectories and outcomes for many years to come. Prevention activities and prevention research, through the ActEarly North Institute will be key to reducing risk and mitigating impacts of the pandemic.

### **3. OTHER CONSIDERATIONS**

- None to report.

### **4. FINANCIAL & RESOURCE APPRAISAL**

- There are no financial issues arising from this report.

### **5. RISK MANAGEMENT AND GOVERNANCE ISSUES**

- There are no risk management or governance issues arising from this report.

### **6. LEGAL APPRAISAL**

- There are no legal issues arising from this report..

### **7. OTHER IMPLICATIONS**

#### **7.1 EQUALITY & DIVERSITY**

- There are no equality or diversity issues arising from this report. C-SAG outputs provide information to support Bradford Council and partners in delivering their equality and diversity objectives.

#### **7.2 SUSTAINABILITY IMPLICATIONS**

- There are no equality or diversity issues arising from this report.

#### **7.3 GREENHOUSE GAS EMISSIONS IMPACTS**

- There are no greenhouse gas emission impacts arising from this report.

#### **7.4 COMMUNITY SAFETY IMPLICATIONS**

- There are no community safety implications arising from this report.

#### **7.5 HUMAN RIGHTS ACT**

- There are no human rights act implications arising from this report.

#### **7.6 TRADE UNION**

- There are no trade union implications arising from this report..

## **7.7 WARD IMPLICATIONS**

- There are no ward specific implications arising from this report.

## **7.9 IMPLICATIONS FOR CORPORATE PARENTING**

There are no implications for corporate parenting arising from this report.

## **7.10 ISSUES ARISING FROM PRIVACY IMPACT ASSESSMENT**

There are no privacy issues arising from this report.

## **8. NOT FOR PUBLICATION DOCUMENTS**

- None.

## **9. OPTIONS**

- This report is for information only.

## **10. RECOMMENDATIONS**

- Members are asked to consider and note the contents of this report.

## **11. APPENDICES**

- Appendix 1 – Summary of C-SAG outputs and publications March 2020-July 2020
- Appendix 2 – Ongoing BIHR COVID-19 related research activity



## 11.1 Appendix 1 – C-SAG outputs and publications March 2020-July 2020

### Workstream 1 – Supporting defining and identifying vulnerable groups

Type	Item	Lead
Collaboration	Specific Vulnerable Groups sub group led by BMDC with contributions from BIHR based on knowledge from Born in Bradford research and Connected Bradford data.	-
<a href="#">Briefing Paper</a>	Vulnerable Groups and Recovery – Principles for minimising the impact of lockdown exist on vulnerable groups and wider inequalities.	BMDC
<a href="#">Briefing Paper</a>	Child Wellbeing Pre-COVID-19 – Highlights of the prevalence of vulnerabilities to support planning during the crisis and recovery period.	BIHR
<a href="#">Briefing Paper</a>	Groups who are vulnerable to the wider health, social and economic impacts of COVID-19 in Bradford – defining and quantifying groups and associated control/mitigation measures.	BMDC

### Workstream 2 – Supporting immediate District scenario planning for COVID-19

Type	Item	Lead
<a href="#">Briefing Paper</a>	An overview of models for predicting demand for COVID-19 hospital inpatient care in local areas of the UK.	BIHR
Collaboration	Shared decision making regarding most appropriate COVID-19 model to apply to the Bradford District by BMDC / CCG colleagues.	-
Output	Provision of model outputs, updated as and when new modelling available.	BMDC / CCG
Collaboration	Shared perspectives and contributions to the development of dashboards and situation reports produced by BMDC / CCG colleagues.	-
Collaboration	Discussions to support identification and sharing of shielded population list.	-
Output	Epidemiological profile of COVID-19 inpatients at BTHFT (periodic updates).	BIHR
Collaboration	Discussions, framework outlines and identification of data sources / types to support system resilience planning by Health and Care.	-
Output	Data on historic patient flow from non-elective admission to discharge including social care demand to support system resilience planning by Health and Care.	BIHR
<a href="#">Briefing Paper</a>	Ethnicity and COVID-19 cases and deaths in Bradford District.	BIHR
<a href="#">Briefing Paper</a>	Excess and COVID-19 deaths analysis by cause.	BMDC
Briefing Paper	Excess and COVID-19 deaths analysis by ethnicity and socio-economic deprivation.	BMDC
<a href="#">Briefing Paper</a>	Impact of COVID-19 on BAME communities: summary of national data and evidence.	BIHR
Collaboration	Specific data and intelligence sub-group to enable discussions with Trust / BMDC planning and intelligence leads to support health and care planning.	CCG
Collaboration	Collation and synthesis of shared intelligence and insight to	CCG



	support health and care planning.	
<a href="#">Output</a>	Analysis of shielding population by ethnicity.	CCG
<a href="#">Webinar</a>	For Head Teachers in Bradford District, providing health and scientific advice and support with the challenges of restarting schools – specialist contributions from CCG / BMDC / BIHR / BTHFT.	-

#### Workstream 3 – Assessing family and community impacts associated with COVID-19

Type	Item	Lead
<a href="#">Briefing Paper</a>	Community Soft Intelligence – Key issues noted across various communities in Bradford District after the COVID-19 outbreak and lockdown.	BIHR
Collaboration	Insights and perspectives from partners to shape content of Born in Bradford series of Parent, Children, Pregnant Women and Post Partum Women series of longitudinal surveys and shape focus of in-depth qualitative research.	-
<a href="#">Briefing Paper</a>	Findings of the First 1000 Participants in the Born in Bradford COVID- 19 Parents Survey.	BIHR
Collaboration	Establishment of a Community Soft Intelligence Group to support collaborative working and sharing of insights gained through community engagement work from partners including BMDC / CCG / BIHR / Health Watch / Community and Voluntary Sector Assembly.	-
<a href="#">Webinar</a>	For District partners and other relevant organisations e.g. Public Health England, West Yorkshire and Harrogate Health and Care Partnership to share preliminary findings of Born in Bradford COVID-19 Parents Survey and gather partner insights.	BIHR

#### Workstream 4 – Assessing and modelling indirect impacts of COVID-19

Type	Item	Lead
Collaboration	Insights and perspectives from partners to shape the development of initial analysis plan to provide intelligence on the medium and longer-term impacts of COVID-19 on the population.	-
Output	Analysis of changing trends in Accident and Emergency attendance – comparison of pre-lockdown with lockdown period.	CCG
<a href="#">Briefing Paper</a>	Impact of COVID-19 on Accident and Emergency activity (April 2020).	BIHR
<a href="#">Briefing Paper</a>	Impact of COVID-19 on Accident and Emergency activity of children and young people (April 2020).	BIHR
<a href="#">Briefing Paper</a>	Impact of COVID-19 on Accident and Emergency activity (April - June 2020).	BIHR
<a href="#">Briefing Paper</a>	Impact of COVID-19 on Accident and Emergency activity of children and young people (April – June 2020).	BIHR
<a href="#">Briefing Paper</a>	Change in admissions from stroke and heart attack during COVID-19.	BIHR

#### Workstream 5 – Harnessing Connected Data to support the District response to COVID-19

Connected Bradford and associated research databases have provided the appropriate

infrastructure supporting BIHR analysis, outputs and briefing papers to inform the system response during this time. Additional data has been added to the Connected Bradford system and progress has been made regarding data sharing agreements and impact assessments with other partners. Hosting of Connected Bradford is currently transitioning to a secure cloud environment within the Yorkshire and Humber Care Record which will increase accessibility and functionality over the coming months.

#### Publications

- Lawton T, Wilkinson KM, Corp A, Javid R, MacNally L, McCooe M, et al. Reduced ICU demand with early CPAP and proning in COVID-19 at Bradford: a single centre cohort. medRxiv. 2020:2020.06.05.20123307. (<https://doi.org/10.1101/2020.06.05.20123307>)
- Power M, Doherty B, Pybus K, Pickett K. How COVID-19 has exposed inequalities in the UK food system: The case of UK food and poverty [version 2; peer review: 5 approved]. Emerald Open Research. 2020;2(11). (<https://doi.org/10.35241/emeraldopenres.13539.2>)
- Santorelli G, Sheldon T, West J, Cartwright C, Wright J. COVID-19 in-patient hospital mortality by ethnicity [version 1; peer review: 2 approved]. Wellcome Open Research. 2020;5(86). (<https://doi.org/10.12688/wellcomeopenres.15913.1>)
- Sheldon TA, Wright J. Twin epidemics of covid-19 and non-communicable disease. BMJ. 2020;369:m2618. (<https://doi.org/10.1136/bmj.m2618>)

## 11.2 Appendix 2 Ongoing BIHR COVID-19 related research activity

ID	Research Item	Status
<b><i>Born in Bradford</i></b>		
A01	<a href="#">Family Survey (1a - Lockdown)</a>	Final analysis underway
A02	<a href="#">Children's Survey</a> and <a href="#">Parent supplement</a> (2a - Lockdown)	Data collection complete - analysis pending
A03	<a href="#">Pregnancy Survey (3a - Ongoing)</a>	Data collection ongoing
A04	Post Partum Survey (3b/4a - 10-14 weeks)	Data collection ongoing
A05	Post Partum Survey (3c/4b - 6 months)	To be developed
A06	Post Partum Survey (3d/4c 12 months)	To be developed
A07	Family Survey (Round 1b - BiB version October 2020)	To be developed
A08	Family Survey (Round 1c - BiBSB version October 2020)	To be developed
A09	Children's Survey (Round 2b October 2020)	To be developed
A10	Family Survey (Round 1bb - BiB version January 2021 onwards)	To be developed
A11	Family Survey (Round 1cc - BiBSB version January 2021 onwards)	To be developed
A12	Children's Survey (Round 2c January 2021 onwards)	To be developed
A13	Growing Up Restart & LPS Serology (September 2020)	TBC
A14	Serology UKCIC	TBC
A15	Health Beliefs Interviews (inc. Imms)	Data collection imminent
A16	Children and Young People's Mental Wellbeing Interviews	Data collection imminent
A17	Pregnant Women Interviews	Data collection imminent
A18	Post Partum Interview (upto 3 months)	TBC
A19	Post Partum Interview (6 months)	TBC
A20	Post Partum Interview (9-12 months)	TBC
A21	Partner Interviews (time points TBC)	TBC
A22	Perinatal Professionals Interviews	TBC
A23	Soft Intelligence Report - District Summary upto July 2020	Synthesis underway
A24	Community food asset mapping / food insecurity	Ongoing
A25	Proposal - Childhood Obesity	Proposal for funding under development
A26	BiB Breathes Survey (January 2021)	To be developed
<b><i>CARE75+</i></b>		
B01	<a href="#">Older Peoples Survey (Round 1 - Lockdown)</a>	Final analysis complete
<b><i>Connected Bradford Research</i></b>		
C01	Diabetes and COVID-19	Analysis developed, staff induction underway
C02	Monthly Epi Report of COVID-19 cases for BTHFT	Ongoing - produced upto end of June 20
C03	Quarterly A&E analysis for BTHFT	Ongoing - produced upto end

		of June 20
C04	COVID-19 Epidemiology - Ethnicity and Co-morbidities	Data collection almost complete, data analysis plan completed
C05	Mental Health analysis during lockdown period	Awaiting data
C06	Longer term health needs of COVID-19 cases	Protocol to be updated then to meet with CCG
C07	COVID-19 and Air Quality analysis	Waiting for testing data upload to SystmOne
<b>Centre for Applied Education Research</b>		
D01	Education and Health webinars	Initial webinar held 15 <sup>th</sup> July. Follow up sessions 27 <sup>th</sup> August and mid September
D02	School Survey	Data collection complete - analysis pending
D03	Electronic Vulnerability Index (eVI)	Leading a National group on implementation of eVI
D04	Delivery and evaluation of a tuition programme	Project delivery plans being developed
D05	SEMH programme for schools over next academic year	Project delivery plans being developed
D06	Whole system coordination of support to schools over next academic year	Project delivery plans being developed
<b>Yorkshire Quality and Safety Group</b>		
E01	Impact of COVID-19 response on staff	Ongoing

## 12. BACKGROUND DOCUMENTS

- Documents referred to in this report are detailed in Appendix 11.1 – C-SAG Outputs March 2020 – July 2020 with appropriate hyperlinks where published.