The impact of Covid-19 on public services in Northern Ireland

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November 2021

Acknowledgements

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Contents

A	cknov	vledgements	2
Ε	xecuti	ive Summary	5
	Intro	duction	5
	Meth	odology and Data	5
	He	alth	6
	So	cial care	6
	Ed	ucation	7
	Distri	butional effects of Covid-19 on selected public services	7
	Impa	ct of possible mitigation measures and recently announced changes to	
	Natio	onal Insurance Contributions and Universal Credit	8
	Reco	ommendations	. 10
1	Int	roduction	. 13
2	Th	e impact of Covid-19 on public services in Northern Ireland	. 15
	2.1 lr	ntroduction	. 15
	2.2 lr	mpacts of Covid-19 on NHS	. 15
	NH	S waiting lists	. 16
	Ad	ditional NHS spending due to Covid-19	. 17
	Re	quired additional expenditure on NHS	. 18
	2.4	Impact on population health	. 20
	2.5	Impact on education services	. 22

		Long-to	erm impacts	22
		Eviden	nce for Northern Ireland	23
3		Method	dology and Data	24
	3.	1 Mo	odelling the impact of Covid-19 on receipt of public services	24
		Health		24
		Social	care	25
		Educat	tion	25
4		Distrib	utional effects of Covid-19 on selected public services	27
	4.	1 Effec	ets by household income	28
	4.2	2 Effec	ets by benefit unit type	29
	4.3	3 Eff	ects by number of children in benefit unit	30
	4.4	4 Eff	ects by age group	31
	4.	5 Impa	cts by ethnicity/nationality	32
	4.6	6 Impa	cts by number of functional disabilities in benefit unit	33
	Fi	gure 4.	7 Impacts by religious affiliation	34
	4.8	8 Sumr	mary	35
5		Impact	t of possible mitigation measures and recently announced changes to	
N	atio	onal Ins	surance Contributions and Universal Credit	37
	5.	1 Inti	roduction	37
	5.2	2 Mi	itigation policies	37
		Outline	e of mitigation policies	37
		Costin	gs of mitigation policies	39
	5.3	3 Ch	anges to the tax and benefit system	40
		Increas	se in National Insurance Contributions	40
		Reduc	tion in Universal Credit taper	41
	5.4	4 Distri	butional impacts by household income quintile	41
	5.4	4 Distri	butional impacts by benefit unit type	44

	5.5 Distributional impacts by number of children			
	5.6 D	istributional impacts by age of adults	49	
	5.7 D	istributional impacts by ethnicity/nationality	51	
	5.7 D	istributional impacts by number of functional disabilities of adults in benefit		
	unit		53	
	5.8	Summary	55	
6	Co	nclusions and Recommendations	57	
	6.1	Conclusions	57	
	6.2	Recommendations	59	
R	eferer	nces	60	
Α	Appendix			

Executive Summary

Introduction

This report is a companion to the recently published NIHRC report *The impact of public spending changes in Northern Ireland* (Reed and Portes, 2021) which presented the results from a Cumulative Impact Assessment (CIA) of the impact of changes in public spending in Northern Ireland between the 2010-11 and 2021-22 tax years. That report excludes the impact of the Covid-19 pandemic which has had a substantial impact on public spending and the public finances in Northern Ireland as elsewhere in the UK. This short supplementary report therefore:

- Analyses the impact of Covid-19 on public spending pressures and public service quality in specific functional areas of spending in Northern Ireland (in particular, health and education). These services make up the bulk of public spending attributable to individuals in Northern Ireland, as in the UK as a whole, and are also likely to be the public services most directly affected by the pandemic.
- Analyses the distributional consequences of these pressures, in particular which households are most affected
- Discusses potential options for mitigating these impacts through the social security system.

It does not attempt to be a comprehensive assessment of the impact of covid-19 on Northern Ireland households or the long-term implications for public service provision, but to identify at a high level the key potential impacts and some possible mitigations.

Methodology and Data

Our analysis uses the Landman Economics public spending model, as used for the recent Cumulative Impact Assessment of public spending trends in Northern Ireland.

Health

For health spending, our objective is to model the impact of Covid-19 in terms of reducing the amount of other health services being delivered. During lockdown, disruption to non-Covid NHS services was severe, with a large proportion of routine operations and outpatient services being postponed and a reduction in GP capacity. After lockdown the level of service returned closer to normal, but with an increased backlog of patients, as evidenced by increased waiting lists. Data analysis in Chapter 2 of this report also suggests that the incidence of health problems in the adult population has increased since 2020 – perhaps due to "long Covid". Additionally, a substantial proportion of NHS services are still taken up with treating Covid-19 patients even after the vaccination roll-out and the ongoing booster programme.

We model the impact on non-Covid NHS spending in Northern Ireland as equivalent to a 10 per cent reduction in the value of NHS services received in 2021-22 (the time period here is arbitrary, chosen so that we can compare the impacts to those modelled in the CIA and to the mitigations we model below; the actual impacts were felt over the period from March 2020 to the present). The 10 per cent figure is an illustrative estimate based on surveying the literature on the impact of Covid on the NHS in the medium term. To some extent, the precise figure used here is less important than the overall distributional impacts of the reduction in non-Covid NHS services, which would look similar if a smaller (or larger) impact estimate were used instead.

Social care

It seems reasonable that Covid-19 would have an impact on social care services for two main reasons. First, the added pressure on NHS services creates indirect additional pressure on social care services due to increased delays for social care clients receiving treatment, hospital bed shortages for inpatient stays, etc. Second, the deterioration in population health observed due to "long Covid" may well translate into increased demand for social care (at least in the longer term). We have modelled the impact on social care spending in Northern Ireland as equivalent to a 5 per cent reduction in the value of social care services received in 2021-22.

Education

We model two levels of reduction in the value of education services:

- 15% for children in households who are eligible for free school meals;
- 10% for children in households who are not eligible for free school meals,
 and for adults who are in higher or further education.

There is solid evidence from existing research studies (cited in Chapter 2 of this report) that the impact of the school lockdowns was more severe on average for disadvantaged children in particular.

Again, while we model these impacts as applying to the value of education services in 2021-22, this is so that we can illustrate the impacts compared to other policy changes, not because all the impacts occurred in that year.

Distributional effects of Covid-19 on selected public services

- Covid-19 has a roughly similar estimated annual cash impact across the bottom 80% of the household income distribution (average reductions in the value of services received of between £800 and £900 per year) but a smaller impact for the top quintile (a reduction of around £700 per year).
- The average impact on reductions in education services due to Covid-19 is similar for lone parent families and couple parent families, with average reductions of between £1,000 and £1,100 per year.
- The estimated impact of reductions in health and social care services is largest for pensioners – couple pensioners lose around £1,150 per year on average.
- Families with three or more children lose an average of over £2,000 per year from the reduction in education services due to Covid-19, compared to around £1,200 per year for families with two children.
- By age group, the largest overall impacts from Covid-19 on the value of public services received are for benefit units where the average age of adults is

- under 25, and benefit units where the average age of adults is 35 to 44. Both these groups lose between £850 and £950 per year on average.
- The average impacts of Covid-19 on the value of service provision are almost identical for benefit units who identify as White British and those who identify as White Irish. For BAME benefit units, the average impact of education losses is larger but the impact of health and social care losses is smaller than the other two groups.
- The impact of Covid-19 on the value of health and social care services
 received is larger the more disabilities the benefit unit has. Benefit units with
 four or more disabilities lose more than £1,500 per year on average compared
 to around £250 on average for non-disabled benefit units.
- The estimated impacts of Covid-19 on health and social care services are of similar magnitude for Catholic, Presbyterian and Church of Ireland benefit units (losses of between £550 and £650 per year in each case). The negative impacts of Covid-19 on education services are larger for Catholic benefit units than Presbyterian or Church of Ireland benefit units.

Impact of possible mitigation measures and recently announced changes to National Insurance Contributions and Universal Credit

This chapter looks at the distributional impact of a number of mitigation policies which the Northern Ireland Executive could introduce (funding permitting) to help offset the impact of the reductions in the efficacy of health, social care and education spending due to Covid-19. The policies modelled are as follows:

- A payment to claimants of Universal Credit, Housing Benefit and/or Child Tax Credit which would offset the two-child limit introduced in 2017 whereby child additions for third or subsequent children born after April 2017 are not payable.
- 2. An additional payment of £20 per month per child for families in receipt of Universal Credit or Child Tax Credit.
- 3. An increase of 15 per cent in per-pupil funding for school pupils eligible for free school meals.

4. An additional payment of £20 per month for each adult or child claiming the higher or lower disability addition for Universal Credit, or the equivalent legacy benefits.

We also model the distributional impact of two reforms to the tax and social security system introduced in autumn 2021: (a) the 1.5 percentage point increase in the rates of employee, employer and self-employed National Insurance Contributions and (b) the reduction in the taper applied to earned income in the Universal Credit assessment from 63 to 55 per cent.

The main results from the analysis are as follows:

- The package of mitigation measures plus the change to the Universal Credit taper offsets just under half of the impacts of Covid-19 for the bottom two quintiles of the household income distribution. The measures have smaller positive impacts for the third and fourth quintiles, but no impact for the top quintile. By contrast, the NICs increase has the biggest negative impact for the top quintile.
- The total distributional impact of tax, welfare and other public spending changes remains regressive as a proportion of final income when Covid-19, mitigation measures and the NICs and UC changes are taken into consideration.
- The package of mitigations and the reduction in the UC taper are strongly focused on families with children, with lone parent families gaining the most (almost enough to fully offset the estimated impact of losses from Covid-19 on average). However, lone parents still lose out (on average) to a far greater extent than other benefit unit types from the overall package of tax/welfare and spending changes since 2010.
- The package of mitigations and the UC taper change are most effective for families with three or more children, offsetting almost the whole of the combined impact of Covid-19 and the NICs increase on average. However, families with three or more children still lose an average of around 11% of final income from all tax, welfare and public spending changes, including Covid-19 and the mitigation and other measures assessed in this Chapter.

- The package of mitigations and the reduction in the UC taper have the largest positive impact for families where the average age of adults is 35 to 44 years (with the next largest impact in the 25-34 age group).
- The group where the average age of adults is under 25 loses out more from the full package of changes (including Covid-19, mitigation measures, and the Universal Credit and NICs changes) than any other group, with average losses of around 9% of final income.
- The average impacts of the mitigation package, the UC taper change and the NICs increase for White British and White Irish benefit units are very similar.
 For BAME benefit units, the positive impact of the mitigations and the UC change is larger than for the other two groups.
- Taking Covid-19 and the mitigation measures and UC and NICs changes into
 account exacerbates the extent to which benefit units with greater numbers of
 adult disabilities lose more from the tax/welfare and spending changes
 (including mitigations and NICs/UC changes) than non-disabled BUs or BUs
 with fewer disabilities. Benefit units with 5 or more functional disabilities lose
 an average of around 8.5% of final income from all changes, compared to 4%
 for non-disabled benefit units.

Conclusions and Recommendations

The precise scale of the negative impact of Covid-19 on public service delivery – in particular the long term impacts of the diversion of NHS capacity to treating Covid patients, and the impacts of school lockdowns on children's educational attainment – are unlikely to be known for several years, at least. However, the results from this report – using reasonable assumptions about the size of the impacts of Covid-19 – show some clear distributional patterns:

 The average cash impact of service reductions resulting from Covid-19 is fairly even across the bottom 80% of the household income distribution. This means that, as a percentage of final income (net income plus the value of services received), the impacts of Covid-19 are distributionally regressive, hitting poorer households harder than rich households.

- Families with children and especially those with disadvantaged children
 (e.g. those eligible for free school meals) lose out particularly badly because of the impacts of Covid-19 on education provision.
- The need to divert substantial NHS resources to treating Covid-19 patients
 results in reductions in service provision for particular groups especially
 disabled adults, and pensioners. The pandemic has exacerbated the already
 very serious problem with capacity in the Northern Ireland NHS.

In terms of priorities for additional funding during the recovery from Covid-19, health (and social care) and education are the obvious priorities. Our view is that there is a clear case for additional funding for both service areas, but if we had to pick just one top priority it would be additional education funding. Although the Northern Ireland NHS faces substantial challenges it has received much more generous funding settlements than Northern Ireland schools over the last decade, compared to schools. This is why we have recommended a 15% increase in schools funding for pupils eligible for free school meals as one of our proposed package of mitigation measures.

Meanwhile, the Universal Credit changes announced in the October 2021 Budget have a progressive impact on low income families but will not help families who are not in work. The ending of the 2-child limit on Universal Credit, tax credits and Housing Benefit payments and an additional payment for low-income families with children would also help offset some of the regressive impact of Covid-19 on public services.

Finally, our modelling shows that Covid-19 has a negative impact on people with disabilities, with larger losses for adults with a greater number of functional disabilities. The negative impact of Covid-19 on health and social care service provision has exacerbated the extent to which disabled benefit units suffer losses from the changes since 2010 overall, and reveals a clear case for additional benefit payments for disabled adults on low incomes, in particular.

We recommend that the Northern Ireland executive:

- Funds a mitigation package consisting of a mix of increased benefit payments
 and increased schools spending to offset the worst impacts of Covid-19 on
 public services provision and living standards. The package of mitigation
 measures set out in Chapter 5 is a good starting point; the precise details of
 the mitigation package should be drawn up after consultation with affected
 groups and stakeholders.
- Conducts additional research on the impacts of the Covid-19 pandemic on public services provision. A mix of qualitative and quantitative survey evidence would enable a more detailed assessment of how Covid-19 has affected public services.

1 Introduction

The Northern Ireland Human Rights Commission (NIHRC) commissioned Landman Economics and Aubergine Analysis to undertake a Cumulative Impact Assessment (CIA) of the impact of changes in public spending in Northern Ireland between the 2010-11 and 2021-22 tax years. The recently published NIHRC report *The impact of public spending changes in Northern Ireland* (Reed and Portes, 2021) contains the results from that CIA, showing the projected distributional impact of changes in public spending on groups across a range of characteristics – including net income, gender and family demographics, age, ethnicity, disability status and (for the first time in this context) religion. It also shows the combined impact of public spending changes and tax and social security reforms on the final income of these groups (where final income is defined as net income plus the value of public services that can be allocated to households).

The CIA report excludes the impact of the Covid-19 pandemic which began in early 2020 and is still ongoing at the time of writing, in October 2021. Covid-19 has had a substantial impact on public spending and the public finances in Northern Ireland as elsewhere in the UK due to the introduction of the Coronavirus Job Retention Scheme (CRJS) (furlough) scheme, which supported about 287,000 jobs, the Self-Employment Income Support Scheme (SEISS), which provided approximately £770 million in support, and over £2 billion in business loan schemes. In addition, about £4.5 billion in additional funding for the Northern Ireland Executive was provided through the Barnett formula across 2020-21 and 2021-22.

However, there are also additional impacts of Covid-19 on household welfare because the pandemic has, despite additional spending on health and other services, reduced the quantity and quality of public service provision, particularly in health and education. It may also lead to further additional spending needs for health and social care, as a result of the impact of Covid-19 on population health in the short and long-term (e.g. increased hospitalisations, and "long Covid").

This short supplementary report therefore:

- Analyses the impact of Covid-19 on public spending pressures and public service quality in specific functional areas of spending in Northern Ireland (in particular, health and education)
- Analyses the distributional consequences of these pressures, in particular which households are most affected
- Discusses potential options for mitigating these impacts through the social security system.

It does not attempt to be a comprehensive assessment of the impact of covid-19 on Northern Ireland households or the long-term implications for public service provision, but to identify at a high level the key potential impacts and some possible mitigations.

2 The impact of Covid-19 on public services in Northern Ireland

2.1 Introduction

Covid-19 has had a major impact on human health and wellbeing, the economy and public services in all of the UK, including Northern Ireland. In particular, it has led to major challenges to the delivery of key public services, both because of pressures on the NHS and covid-related restrictions such as school closures. In this section we do not attempt to provide a comprehensive analysis of the economic impact of covid-19 or on the response of the NHS to the pandemic; we focus specifically on the impact of covid-19 on the provision (in terms of quantity and quality) of key public services, and hence the impact on household welfare.

We focus on three public services in particular: the NHS, social care and education. These make up the bulk of public spending attributable to individuals in Northern Ireland, as in the UK as a whole, and are also likely to be the public services most directly affected by the pandemic.

2.2 Impacts of Covid-19 on NHS

While NHS spending has increased substantially, because of additional pandemic-related funding provided, there has been a large reduction in (non-pandemic) related health output. The Office of National Statistics estimated that output in the health sector, measured in volume terms (that is, by the quantity of outputs rather than the amount of spending) fell by approximately 25% between February and May 2020, although it had largely recovered by early 2021 (ONS, 2021a).

In this section we examine the impact of this on health outcomes in the short term, and also on future pressures on spending on the NHS in Northern Ireland.

Most of the existing evidence base for the impact of Covid-19 on the NHS looks at the NHS in England rather than Northern Ireland, Scotland or Wales. However, the same underlying issues are likely to have affected the service in Northern Ireland so the evidence base is nonetheless useful for the current report. Covid case rates in Northern Ireland have, to date, been comparable to, but slightly higher, than the UK average (on a cumulative basis, approximately 14 cases of covid per 100 population compared to 13 per 100 for the UK as a whole). This suggests that impacts on the NHS in Northern Ireland are likely to be similar to the rest of the UK.

NHS waiting lists

Northern Ireland, as in the rest of the UK, has seen large increases in NHS waiting lists. As of June 2021, approximately 350,000 patients in Northern Ireland – more than one in six of the population, and higher than in other parts of the UK– were on a waiting list for a first consultant-led outpatient appointment, up approximately 40,000 over the year. Waiting times have also increased, with more than half waiting longer than a year.

Even this may underestimate the extent of pent-up demand; the Institute for Fiscal Studies (IFS) commented in August 2021 (referring to the NHS in England, but similar issues are likely to apply to NI) that "the growth in waiting lists until now has actually been remarkably small given the incredible disruption to the NHS from Covid-19", but this was largely due to a fall in the number of people joining the waiting list at the same time that a lot of NHS operations and other services were cut back or suspended so that the NHS could focus on treating Covid-19 patients.

The extent to which NHS waiting lists grow in future years depends on two factors:

- (1) what happens to the patients who did not receive care during the pandemic. Since March 2020, 7.4 million fewer people have joined the waiting list in England than implied by pre-pandemic patterns. It is unknown how many of these patients will eventually join the waiting list, and over what period. It is also unknown whether the health status of these patients will have deteriorated as a result of the delay in their treatment, with sicker patients potentially requiring more resources to treat.
- (2) what happens to NHS capacity for non-Covid treatment. In May 2021, admissions from the waiting list were just 82% of their 2019 level (due to the

ongoing need to devote resources towards treating acutely ill Covid patients, infection control measures, staff sickness and self-isolation and other factors. The successful rollout of the vaccine to most of the adult UK population has reduced the number of hospital admissions and hospital treatments required for Covid-19 but hospital admissions for Covid across all four UK countries are still running at a high – and increasing – rate.

IFS presented a number of illustrative scenarios for waiting lists in England over the next 4 years. The central scenario – assuming that 65% of patients 'missing' from the waiting list in 2020-21 eventually return to be treated, and the NHS operates at 95% capacity for the full period – suggests that waiting lists would rise to 11 million by mid-2022 and then climb to over 15 million by the end of 2025, as supply fails to keep pace with demand. The IFS warns that "failure to return to at least prepandemic capacity could see waiting lists on an ever-rising trajectory as demand continues to outpace supply" (Stoye et al, 2021).

Consistent with this, internal analysis for Northern Ireland by the Department of Health suggests that waiting lists for the Northern Ireland NHS could double by 2026, to 600-700,000, and that funding of approximately £700 million would be required over this period to contain this rise (McCambridge, 2021).

Additional NHS spending due to Covid-19

Approximately £30 billion of extra funding was allocated to the NHS in England across the two financial years 2020-21 and 2021-22, £15bn in each year (Health Foundation, 2021a). £15bn is approximately 12 per cent of annual expenditure on the NHS in 2021-22.

However, most analyses suggest that this is likely to be inadequate to address the scale of the backlog. The Health Foundation, which has been conducting a large-scale research programme on the impact of Covid-19 on the NHS, said: "Covid-19 will impact the NHS for many years to come – services won't just bounce back to 'business as usual' next spring [2022]. Significant additional investment will be needed for the rest of this parliament and beyond to make progress on the elective

care backlog, as patients who weren't treated during the pandemic return, and to meet rising demand for mental health and primary care services. But even with further funding, the extra staff, beds and equipment needed to treat the backlog of patients may prove the biggest constraint." (Health Foundation, 2021a)

Required additional expenditure on NHS

The Health Foundation's REAL (Research and Economic Analysis for the Long term) Centre is currently undertaking a project that forecasts long-term funding requirements for health and social care in England to 2030/31. (As with other evidence in this subsection, ideally we would have liked to use research specific to the NHS in Northern Ireland, but none exists to the required level of detail). The REAL Centre's initial report looks at funding requirements for health and social care up to 2024/25 (Health Foundation, 2021b).

The Health Foundation identifies the following drivers of increased health and social care expenditure:

- A growing and ageing population
- Rising morbidity: the number of people living with long term conditions has been growing and is expected to grow further
- Covid-19 (vaccination programme and additional mental health demand from the pandemic)
- An elective care backlog, caused partly (but not completely) by Covid-19 (waiting lists in England were already growing before the onset of the Covid-19 pandemic).

Note that the Health Foundation analysis does not consider the impact of "long Covid" – only the initial costs of Covid-19 are included. Thus, their projected requirements for additional spending on health and social care are likely to be an underestimate.

Table 2.2 presents the Health foundation's two scenarios for the NHS over the next five years in England: "Stabilisation" and Recovery".

Table 2.2. The Health Foundation's 'Stabilisation' and 'Recovery' scenarios for the NHS in England

Stabilisation	Recovery	
Lower pay growth though positive in real	A decade of high productivity and pay	
terms, and lower, but positive productivity	growth	
growth		
The elective backlog from COVID-19 met	The elective backlog from COVID-19 met	
by end of 2028/29 (double the time of	by end of 2024/25	
recovery)		
A&E and elective waiting times back to	NHS Constitution standards for A&E and	
2018/19 levels*, but still below NHS	elective waiting times being met again by	
Constitution standards	2024/25	
Public health spending growing in line with	Public health spending growing in line with	
NHS budget; additional funding for social	NHS budget; increased access to social	
care packages, but not care workers wages	care packages and higher rates of pay for	
	care workers	

Source: Health Foundation (2021b)

The research finds that funding growth for both health and social care would need to be significantly higher than in recent years to meet care needs. Health and social care funding in England would require average real terms increases of 3.7% and 4.3% for Stabilisation and Recovery, respectively.

The Health Foundation does not model the impacts of Covid-19 (except for the cost of the vaccination programme and the mental health impacts of the lockdowns in 2020 and 2021) because:

"The ongoing impact of Covid-19 on the NHS remains too uncertain to model conclusively.... With Covid-19 moving from a pandemic to an endemic disease the report assumes that there will be ongoing costs from the vaccine programme, as well as significant impacts on the way NHS care is delivered. Our analysis suggests that

if this led to a fall in productivity of 2-4% it would cost approximately an additional £3bn to £6bn (per year) to maintain the same level of care, and that would leave the NHS facing funding pressures of between £7bn and £13bn in 2022-23." (Health Foundation, 2021b).

It is difficult to translate this directly into requirements for additional expenditure in Northern Ireland. On the one hand, Northern Ireland has seen higher increases than England in recent and forecast NHS expenditure, as shown in our previous report. Between 2010-11 and 2021-22, real terms spending on the NHS per family in Northern Ireland is forecast to increase by around 25% compared to around 12% in England (Reed and Portes 2021, Figure 4.5). However, as noted above, waiting lists in Northern Ireland are significantly higher than the UK average. On a pro-rata basis, the Health Foundation figures would translate to funding pressures of between £200 and £500 million per year for the NHS in Northern Ireland.

2.4 Impact on population health

It is unclear whether the pandemic will lead to increased demand for health services over the medium to long-term. ONS estimate that approximately 1.8% of the population have ongoing symptoms associated with "long covid"; the corresponding figure for Northern Ireland is slightly lower, at about 1.4%, although there is significant uncertainty. This would among to about 26,000 people (ONS, 2021b).

As a proportion of the UK population, prevalence of self-reported long COVID was greatest in people aged 35 to 69 years, females, people living in the most deprived areas, those working in health or social care, and those with another activity-limiting health condition or disability.

Table 2.1 shows evidence from the UK Labour Force Survey on the proportion of the adult population reporting any long-standing health problem, broken down into three age groups (18 to 39, 40 to 59, and 60 and over). The statistics for the UK as a whole are used rather than Northern Ireland because the Northern Ireland sample of

the LFS makes precise comparisons between different quarters more difficult. However, the Northern Ireland-only statistics are shown in Appendix A of this report.

Table 2.1: trends in proportion of adults with any long-standing health problem (UK-wide)

Age group	2018 q2	2019 q2	2020 q2	2021 q2
Under 40	22.4%	23.2%	24.8%	27.7%
40 to 59	36.4%	36.3%	37.7%	38.3%
60+	62.2%	62.2%	62.5%	62.4%

Source: author's analysis of statistics from UK Labour Force Survey

Table 2.1 shows that the proportion of aged under 40 with any health problem increased slightly between 2018 2nd quarter and 2019 2nd quarter (from 22.4% to 23.2%). The incidence of health problems in the population then increased much faster, to 24.8% in 2020 and 27.7% in 2021. Between 2019 and 2021 2nd quarter the incidence of health problems in the under-40 age group increased by 4.5 percentage points. The comparable figure for the 40-59 age group was 2 percentage points and for the over-60 age group, only 0.2 percentage points.

The Covid-19 pandemic therefore appears to have been associated with an increase in health problems for younger adults, but not for older adults. It is too early to say whether this deterioration of health indicators in the young and middle-aged adult population – perhaps a marker for "long Covid", but also possibly relating to mental health problems associated with covid-related restrictions – will be sustained into the long term. Even a short-term increase in health problems is likely to cause increased demand for NHS services. A long-term increase would exacerbate this and is likely to lead to increased demand for social care services as well.

2.5 Impact on education services

As with health, while overall government spending on education did not fall as a result of the pandemic, the quantity and quality of education provided to children was reduced, as a result of school closures and the shift to online instruction, as well as elevated levels of teacher and pupil absence. The ONS has devoted a considerable amount of effort to estimating the impact of these shifts on education output during the pandemic, using a variety of data sources to measure, for example, the effectiveness of remote learning. It now estimates that education output in the second quarter of 2020 was fully 40% lower than in the last quarter of 2019, but had recovered by the fourth quarter of 2020 to a fall of about 12%; although these estimates will undoubtedly be further revised and are in any case indicative only (ONS, 2021c).

What impact will this reduction in education services have on children? A number of studies have examined "learning loss" in England. Research by the National Foundation for Educational Research (NFER) found that pupils in Key Stage 1 had on average lost about 2 months of educational progress as a result of covid, and that the gap between disadvantaged children and others had widened (Rose *et al*, 2021). A more recent study by the Education Policy Institute found that average learning losses for primary school pupils were approximately 2 months in reading and over 3 months in maths. Again, it found that pupils from disadvantaged groups suffered more (Renaissance Learning/ Education Policy Institute, 2021).

While both these studies focused on England, the EPI study did analyse regional differences, finding that learning loss was substantially greater in the North-East and Yorkshire than in London and the South-West; while it would be unwise to draw firm conclusions from this, the demographic profile of these regions (NI is more similar to the former) suggest that NI schools would be likely to be at least as adversely affected as the England average.

Long-term impacts

If maintained, learning losses of these magnitudes would have considerable impacts on the long-term outcomes of children, particularly more disadvantaged children; a substantial loss of learning is likely to be followed by lower skills and qualifications for children at school during the pandemic, resulting in permanently lower incomes during their careers. Standard estimates of the return to education suggest that an additional year of education results in approximately an 8% increase in earnings.

The IFS estimated that (based on a more pessimistic assumption of half a year's learning loss) today's children face losing £350bn in lifetime earnings unless the UK's governments invest in radical catch-up efforts when the pandemic is over; for Northern Ireland, this would imply a loss of £8 billion, or about 15% of one year's GDP (Sibieta, 2021). In addition, existing inequalities in earnings and incomes would be exacerbated.

Evidence for Northern Ireland

There is little specific evidence for Northern Ireland on the impact of Covid-19 on the education sector, and the evidence that does exist is primarily qualitative in nature. However, there is little reason to doubt that impacts on education in NI will be broadly similar to those in the rest of the UK. For example, a number of reports have highlighted the persistent attainment gap in Northern Ireland, and the likelihood that as in England – the impact of covid and the associated move to remote learning is likely to exacerbate it (Garbutt, 2020; Fleming 2020). There has also been reduced support for children with special needs and their parents as a result of lockdowns (National Childrens Bureau, 2021).

3 Methodology and Data

This analysis uses the Landman Economics public spending model, as used for the recent Cumulative Impact Assessment of public spending trends in Northern Ireland. Details of the methodology used for the model are contained in the previous report (Reed and Portes 2021, ch 3).

3.1 Modelling the impact of Covid-19 on receipt of public services

This report simulates the impact of Covid-19 on three categories of public service spending: health, social care and education. We do not attempt to assess the impact of Covid-19 on the other categories of public spending included in the Landman Economics model (transport, housing and early years services) because the impact of Covid-19 on these service areas, if any, is less clear.

Health

For health spending, our objective is to model the impact of Covid-19 in terms of reducing the amount of other health services being delivered. During lockdown, disruption to non-Covid NHS services was severe, with a large proportion of routine operations and outpatient services being postponed and a reduction in GP capacity. After lockdown the level of service returned closer to normal, but with an increased backlog of patients, as evidenced by increased waiting lists. The analysis of health data in the Labour Force Survey in Chapter 2 also suggests that the incidence of health problems in the adult population has increased since 2020 – perhaps due to "long Covid". Additionally, a substantial proportion of NHS services are still taken up with treating Covid-19 patients even after the vaccination roll-out and the ongoing booster programme.

We model the impact on non-Covid NHS spending in Northern Ireland as equivalent to a 10 per cent reduction in the value of NHS services received in 2021-22 (the time period here is arbitrary, chosen so that we can compare the impacts to those modelled in the CIA and to the mitigations we model below; the actual impacts were

felt over the period from March 2020 to the present). The 10 per cent figure is an illustrative estimate based on surveying the literature on the impact of Covid on the NHS in the medium term (particularly the research from the Health Foundation referenced in Chapter 2). To some extent, the precise figure used here is less important than the overall distributional impacts of the reduction in non-Covid NHS services, which would look similar if a smaller (or larger) impact estimate were used instead.

Note that we do not attempt to model the distributional impact of Covid-19 related spending in the NHS (i.e. the impact of Covid treatment in hospitals, or the vaccination programme). Covid-19 is much more likely to be serious and to require hospitalisation and intensive treatement in the elderly and those with pre-existing conditions. In addition, there is a wide body of research that suggests that those from vulnerable groups, in particular people with disabilities, those of black and Asian origin, and people in low-income households and/or living in deprived areas, are much more likely to adversely affected (see for example ONS 2020).

Social care

It seems reasonable that Covid-19 would have an impact on social care services for two main reasons. First, the added pressure on NHS services creates indirect additional pressure on social care services due to increased delays for social care clients receiving treatment, hospital bed shortages for inpatient stays, etc. Second, the deterioration in population health observed due to "long Covid" may well translate into increased demand for social care (at least in the longer term). We have modelled the impact on social care spending in Northern Ireland as equivalent to a 5 per cent reduction in the value of social care services received in 2021-22.

Education

We model two levels of reduction in the value of education services:

- 15% for children in households who are eligible for free school meals;
- 10% for children in households who are not eligible for free school meals,
 and for adults who are in higher or further education.

There is solid evidence from the studies cited in this section that the impact of the school lockdowns was more severe on average for disadvantaged children in particular.

The timing of the reduction in service efficacy is an important consideration here: it is likely that productivity in education fell by a lot more than 10 to 15% in the lockdown periods when most schooling was being done at home by parents and/or children themselves (depending on the age of the child), and university tuition was restricted to online-only lectures and classes. The return to in-person teaching should restore previous levels of productivity to a large extent but there are nonetheless likely to be ongoing adverse effects arising from the lockdown period. Again, while we model these impacts as applying to the value of education services in 2021-22, this is so that we can illustrate the impacts compared to other policy changes, not because all the impacts occurred in that year.

We assess eligibility for free school meals using the Understanding Society data based on the family claiming at least one of the following benefits: Income Support, income-based Jobseekers Allowance, income-related Employment and Support Allowance, the guarantee element of Pension Credit, Child Tax Credit (with annual gross income of no more than £16,190) or Universal Credit (with net annual household earnings not exceeding £14,000 per year)¹.

¹ Note that we have to model the eligibility conditions for free school meals rather than actual receipt of free school meals because the Understanding Society data does not contain a variable for receipt of free school meals.

4 Distributional effects of Covid-19 on selected public services

This chapter shows the impact of our modelled reductions in the value of public services received due to Covid as outlined in the previous chapter. The format used for the graphs is similar to Chapter 5 in our previous report. Each graph shows the following results:

- Black diamonds (with line if the breakdown category is in a clearly defined order): The total annual impact of real terms changes in public spending across all public services between 2010-11 and 2021-22, excluding the impacts of Covid-19. This is exactly the same as the "total" results in the graphs in Chapter 5 of the previous report.
- Orange bars: the modelled effect of reductions in the value of health and social care services due to Covid-19.
- Green bars: the modelled effect of reductions in the value of education services due to Covid-19.
- Red squares (with line if applicable): the total impact of real terms changes in public spending across all public services, including the impacts of Covid-19.

4.1 Effects by household income

health and social care education

Total (excluding Covid)

£1,500

£1,000

£500

£500

-£1,000

1st (poorest)

2nd

3rd

4th

5th (richest)

Figure 4.1. Simulated distributional impact of Covid-19 on service provision by household income quintile

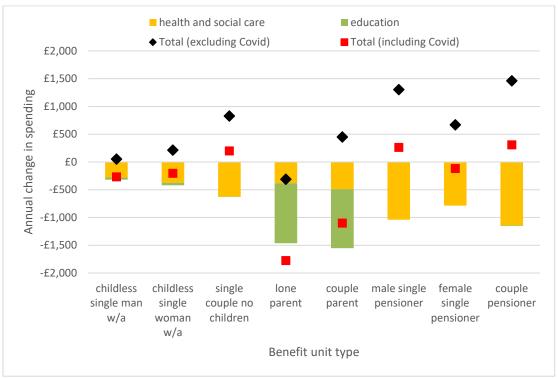
Source: Further analysis of data used in Reed and Portes (2021), Chapter 5.

Figure 4.1 shows that the estimated average reduction in the value of health and social care services due to Covid-19 is larger than the estimated average reduction in the value of education services across all five quintiles of the household income distribution. Covid-19 has a roughly similar estimated annual cash impact in the lowest four quintiles of the distribution (reductions of between £800 and £900 per year) but a smaller impact for the top quintile (a reduction of around £700 per year). Taking the estimated impact of Covid-19 into account, the overall reduction in spending on public services is smallest for the top quintile (at £25 per year) and largest for the second quintile (at £700 per year).

Household income quintile

4.2 Effects by benefit unit type

Figure 4.2. Simulated distributional impact of Covid-19 on service provision by benefit unit type



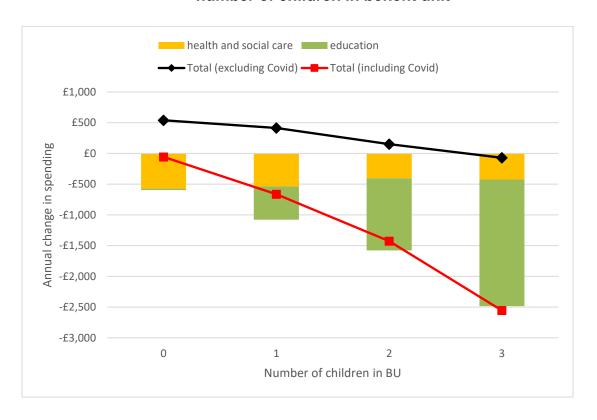
Source: as Figure 4.1

Figure 4.2 shows that analysing the results by benefit unit type, the pattern of estimated impacts of Covid-19 on health and social care provision is very different from the estimated impacts on education provision. Education (not surprisingly) has a very substantial negative impact for lone parents and couple parents (around the same average amount in cash terms for both groups – between £1,000 and £1,100 per year). Health and social care has the largest negative impact for pensioners – especially male single pensioners (around £1,050 per year) and couples (around £1,150 per year). The average impact is smallest for childless single men and women (between £200 and £300 per year in each case). Overall, the negative impact of changes to service provision including modelled impacts of Covid-19 is biggest for lone parents (losses of almost £1,800 per year. For single couples without children, male single pensioners and couple pensioners the overall impact of

spending changes including Covid-19 is positive (averaging £200 to £300 per year in each case).

4.3 Effects by number of children in benefit unit

Figure 4.3. Simulated distributional impact of Covid-19 on service provision by number of children in benefit unit



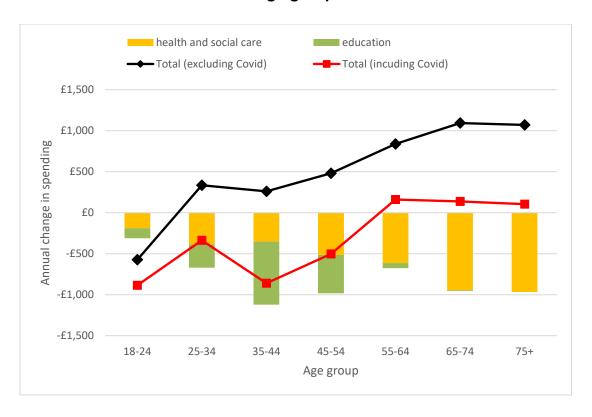
Source: as Figure 4.1

Figure 4.3 shows the estimated effects of Covid-19 on service provision by number of children in the benefit unit. The average impacts of Covid-19 on education provision are substantial for all families with children, but especially for families with three or more children (reductions in service value of over £2,000 per year) and families with two children (losses of almost £1,200 per year). By contrast, the negative impacts of Covid-19 on health and social care provision are slightly larger for childless benefit units and families with one child (losses of around £550 per year in each case) than for families with two or three or more children (losses of around

£400 per year). Overall, including the impact of Covid-19 on service provision exacerbates the extent to which families (and especially families with three or more children) lose out compared to childless adults. Overall losses average almost £2,600 per year for families with three or more children compared to only around £50 per year for childless benefit units.

4.4 Effects by age group

Figure 4.4. Simulated distributional impact of Covid-19 on service provision by age group



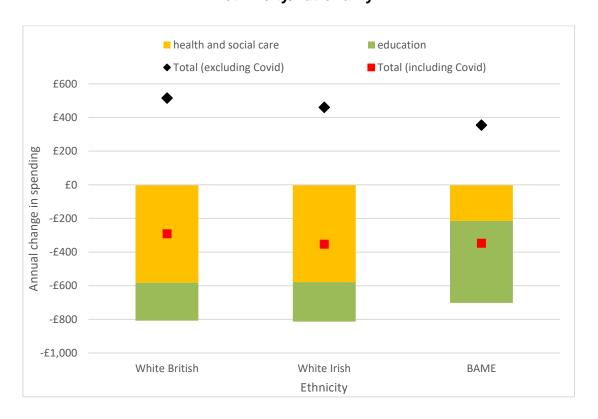
Source: as Figure 4.1

Figure 4.4 shows that the negative impacts of Covid-19 on the value of health and social care services are largest for benefit units where the average age of the adults is 65 years or older. The 65-74 year old age group and the 75 and older age group both lose an average of around £950 per year from the health and social care impacts of Covid-19. The smallest losses for health and social care are for benefit

units where the average age of adults is under 25 (less than £200 per year) and 25-34 and 35-44 year olds (between £350 and £400 per year in each case). By contrast, losses from the impact of Covid-19 on education services are largest for adults aged 35-44 (over £750 per year) and adults aged 45-54 (over £450 per year). Overall, while adults aged under 25 lose out most from the public spending changes excluding Covid impacts, adults aged 35-44 lose out by almost as much as the under-25s when Covid impacts are taken into consideration (between £850 and £900 per year in total). Benefit units with adults with an average age of 55-64 still gain overall from the spending changes since 2010, even when Covid impacts are included, but their gains are almost eliminated on average.

4.5 Impacts by ethnicity/nationality

Figure 4.5. Simulated distributional impact of Covid-19 on service provision by ethnicity/nationality

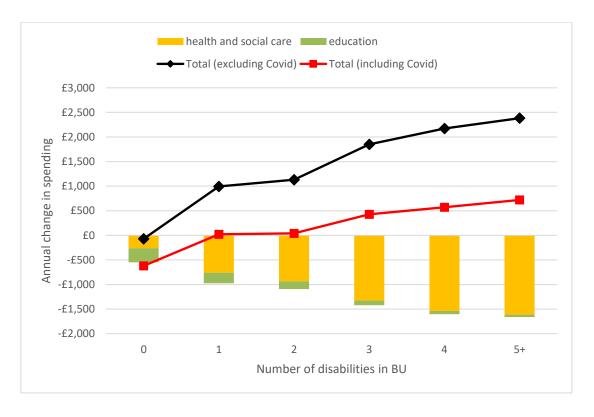


Source: as Figure 4.1

Figure 4.5 shows that the average impacts of Covid-19 on the value of service provision are almost identical for benefit units who identify as White British and those who identify as White Irish. In each case, the benefit units are forecast to lose around just over £200 per year from the impact of Covid-19 on education, and just under £600 from the impact of Covid-19 on health and social care. By contrast, the average impacts of Covid for BAME benefit units are different in composition – the education impact is larger but the health and social care impact is much smaller. Overall, after taking Covid-19 impacts into account, the average value of public service provision falls by between £300 and £350 per year for all three ethnicity/nationality groups.

4.6 Impacts by number of functional disabilities in benefit unit

Figure 4.6. Simulated distributional impact of Covid-19 on service provision by number of disabilities in benefit unit



Source: as Figure 4.1

Figure 4.6 shows that the impact of Covid-19 on the value of health and social care provision is larger, the more disabilities the benefit unit has. Benefit units with five or more disabilities lose an average of just over £1,600 per year from the impact of Covid on health and social services, compared to just over £1,500 per year for benefit units with four disabilities, just over £750 for benefit units with one disability and around £250 for non-disabled benefit units. This is to be expected, given that disabled people are more likely to use health and social care services than non-disabled people. By contrast, non-disabled benefit units experience the largest losses from the impact of Covid on education (just under £300 per year on average). Overall, the inclusion of Covid-19 impacts reduces the extent to which benefit units with more disabilities gain from the overall package of spending changes since 2010 in Northern Ireland compared to benefit units with fewer (or no) disabilities.

Figure 4.7 Impacts by religious affiliation

Figure 4.7. Simulated distributional impact of Covid-19 on service provision by religious affiliation

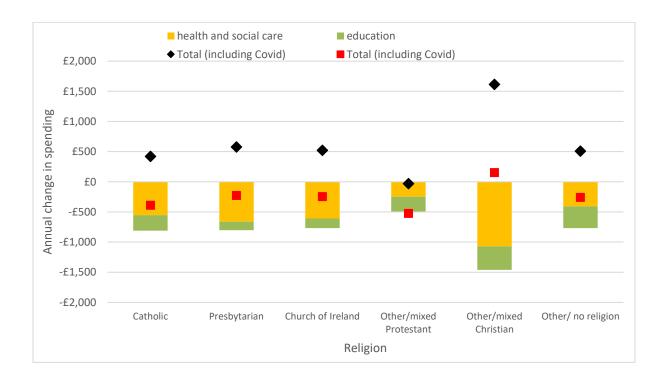


Figure 4.7 shows that the impacts of Covid-19 on health and social care services are of similar magnitudes for Catholic, Presbyterian and Church of Ireland benefit units (losses of between £550 and £650 per year in each case). Losses are much larger for "other/mixed Christian" benefit units, and smaller for "other/mixed Protestant" benefit units and benefit units who identify with other religions or no religion. The negative impacts of Covid-19 on education services are larger for Catholic benefit units than Presbytarian, Church of Ireland or "other/mixed Protestant" benefit units. The largest negative impacts of Covid-19 on education services are for "other/mixed Christian" benefit units and for benefit units from other religions or no religion. Overall, including the impact of Covid-19 on service provision reduces the differences between religious groups in the overall impact of spending changes. When Covid-19 is included, overall spending impacts range from average gains of around £150 (for the "other/mixed Christian" group) to average losses of just over £500 per year (for the "other/mixed Protestant" group.

4.8 Summary

The main findings from this chapter are:

- Covid-19 has a roughly similar estimated annual cash impact across the bottom 80% of the household income distribution (average reductions in the value of services received of between £800 and £900 per year) but a smaller impact for the top quintile (a reduction of around £700 per year).
- The average impact on reductions in education services due to Covid-19 is similar for lone parent families and couple parent families, with average reductions of between £1,000 and £1,100 per year.
- The estimated impact of reductions in health and social care services is largest for pensioners – couple pensioners lose around £1,150 per year on average.

- Families with three or more children lose an average of over £2,000 per year from the reduction in education services due to Covid-19, compared to around £1,200 per year for families with two children.
- By age group, the largest overall impacts from Covid-19 on the value of public services received are for benefit units where the average age of adults is under 25, and benefit units where the average age of adults is 35 to 44. Both these groups lose between £850 and £950 per year on average.
- The average impacts of Covid-19 on the value of service provision are almost identical for benefit units who identify as White British and those who identify as White Irish. For BAME benefit units, the average impact of education losses is larger but the impact of health and social care losses is smaller than the other two groups.
- The impact of Covid-19 on the value of health and social care services
 received is larger the more disabilities the benefit unit has. Benefit units with
 four or more disabilities lose more than £1,500 per year on average compared
 to around £250 on average for non-disabled benefit units.
- The estimated impacts of Covid-19 on health and social care services are of similar magnitude for Catholic, Presbyterian and Church of Ireland benefit units (losses of between £550 and £650 per year in each case). The negative impacts of Covid-19 on education services are larger for Catholic benefit units than Presbyterian or Church of Ireland benefit units.

5 Impact of possible mitigation measures and recently announced changes to National Insurance Contributions and Universal Credit

5.1 Introduction

This chapter looks at the distributional impact of a number of mitigation policies which the Northern Ireland Executive could introduce (funding permitting) to help offset the impact of the reductions in the efficacy of health, social care and education spending due to Covid-19, as modelled in the previous chapter. Section 5.2 gives details of the mitigation policies modelled. Some of these policies were included as potential mitigation options in our 2019 report for NIHRC which performed a cumulative impact assessment of tax and social security changes since 2010 (Reed and Portes, 2019). Others are new to this report.

Also, in the autumn of 2021 the UK Government announced two significant reforms to the tax and social security system: an increase in the rates of employee, employer and self-employed National Insurance Contributions, and a reduction in the taper applied to earned income in the Universal Credit system. These reforms are explained in Section 5.3. Section 5.4 shows the distributional impacts of each of the mitigation options and the NICs and Universal Credit changes, using the same set of breakdown variables as Chapter 6 of our previous 2021 report.

5.2 Mitigation policies

Outline of mitigation policies

The mitigation policies included in this chapter are as follows:

Measure 1: Offsetting the two-child limit

Description: This measure provides a payment to claimants of UC, Housing Benefit and/or Child Tax Credit which would offset the two-child limit introduced in 2017

whereby child additions for third or subsequent children born after April 2017 are not payable.

Included in 2019 report? YES

Rationale in the context of Covid-19: As shown in Figure 4.3 the estimated impact of Covid-19 on education service provision has been particularly severe for families with three or more children,

Measure 2: Additional payment for children in low-income families

Description: This measure is an additional payment of £20 per month per child for families in receipt of Universal Credit or Child Tax Credit.

Included in 2019 report? YES

Rationale in the context of Covid-19: The cash terms impact of Covid-19 is roughly even across the household income distribution, meaning that the percentage impact for low-income households is larger than for higher income households. Also, the reduction in education service provision due to Covid has (obviously) hit families with children in particular.

Measure 3: Additional catch-up education funding for disadvantaged children

Description: this measure would increase per-pupil funding for school pupils eligible for free school meals by 15 per cent.

Included in 2019 report? NO

Rationale in the context of Covid-19: Given the substantial impact of Covid-19 on the education sector, and disadvantaged children in particular (as documented in Section 2.5) there is a clear rationale for additional education funding, targeted on the most disadvantaged pupils. The case for this is complementary to the case for additional financial support for low income families with children, since these children have both been disproportionately affected by benefit cuts (which affect their current standard of living and welfare) and by the impact of covid on education (which will

affect their future life chances). It is beyond the scope of this report to discuss the precise amount or distribution of such funding, or how it should be spent; this is for illustrative purposes only.

There is also a clear case for increased health and social care funding in response to Covid-19, but health in particular has received more generous spending settlements than education in Northern Ireland in the last decade, there is a more immediate need for increased funding for schools.

Measure 4: increased payments for low-income disabled adults

Description: This measure is an additional payment of £20 per month for claimants of Universal Credit who receive the higher or lower disability addition for any adults or children as part of their claim. (Claimants who receive disability additions for more than one person in the household receive £20 per month for each disabled person). The payment is also made to claimants of legacy tax credits and means-tested benefits such as Employment and Support Allowance and Housing Benefit who qualify for disability premia for those payments.

Included in 2019 report? YES

Rationale in the context of Covid-19: As shown in Figure 5.4 of this report, the reductions in health and social care service provision due to Covid-19 have had substantial negative impacts for disabled adults, especially in benefit units with several functional disabilities.

Costings of mitigation policies

Table 5.1 shows estimates of costings for each of the mitigations policies featured in this chapter. We estimate that each individual policy would cost between £30 million and £55 million per year, with the offsetting of the 2-child limit on social security payments being the most expensive measure. The total cost of implementing all four measures simultaneously is estimated at £170 million.

Table 5.1 Costings of mitigation policies if implemented in Northern Ireland (annual, to nearest £5m)

Measure	Estimated Cost (£m)	
Offsetting 2-child limit on Universal	55	
Credit/HB/CTC payments		
Additional payment for children in low-	50	
income families		
Catch-up education funding	30	
Increased payments for disabled	35	
adults		
Total (all measures)	170	

5.3 Changes to the tax and benefit system

Increase in National Insurance Contributions

In September 2021 the UK Government introduced legislation to increase the rates of employee, employer and self-employed National Insurance Contributions (NICs) by 1.5 percentage points above the Primary Threshold (for employee NICs), 1.5 percentage points above the Secondary Threshold (for employer NICs) and 1.5 percentage points above the Lower Profits Limit (for self-employed NICs). The increases are 'uncapped' in that they apply above the Upper Earnings Limit and Upper Profits Limit, i.e. all the way up the earnings distribution. Chapter 5 shows the distributional effect of these reforms as well (they were not included in the earlier CIA report as they do not take effect until 2022-23².

² Note that the NICs reform modelled in this report does not include the conversion of the increase in NICs into a "health and social care levy" which would apply to working pensioners, who are exempt from employee and self-employed NICs. This reform is scheduled to replace the NICs increase from 2023-24 onwards.

Reduction in Universal Credit taper

In the October 2021 Budget the UK Government announced that the earnings taper in Universal Credit (UC) – (the rate at which UC payments are reduced as earnings increase) would be reduced from 63 per cent to 55 per cent. This reform was presented by the Government as a compensation for the withdrawal of the £20 per week increase in UC payments which it had introduced in the spring of 2020 in the initial stages of the Covid-19 pandemic – although in practice the distributional impacts of the two reforms are somewhat different. The £20 per week uplift helped all UC claimants, whereas reduction in the taper rate benefits only those claimants who are in work and with sufficiently high earnings to use up their taper-free work allowance (if applicable). Note that the distributional results presented in Reed and Portes (2021) do not include the £20 per week increase in Universal Credit as the Government had already announced its intention to withdraw the increase from October 2021.

5.4 Distributional impacts by household income quintile

Figure 5.1 shows the distributional impacts of the mitigation options and the changes to NICs and Universal Credit as stacked columns, with the impact of Covid-19 (measured as the estimated change in the value of health, social care and education services as shown in the graphs in Chapter 4) included to make it possible to assess the extent to which any gains from the mitigation measures and the reduction in the UC taper offset the losses from Covid-19 (and the increases in NICs).

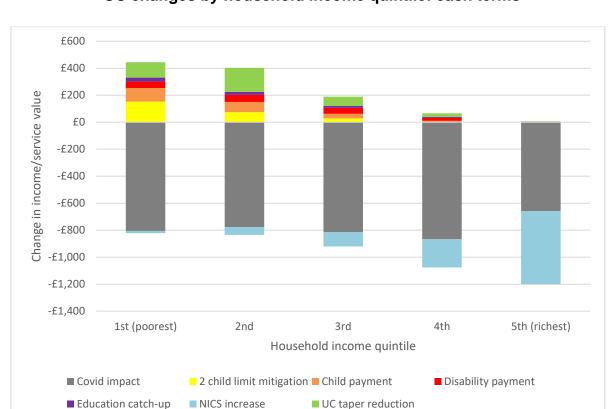


Figure 5.1. Distributional impact of Covid-19, mitigation options and NICs and UC changes by household income quintile: cash terms

Source: Landman Economics Tax-Transfer Model (for analysis of mitigation options and NICs and UC changes); Landman Economics Public Spending Model (for analysis of Covid impact).

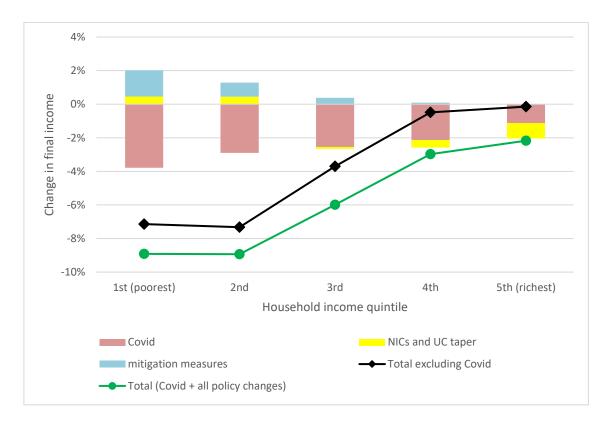
Figure 5.1 shows that the mitigation measures plus the change to the Universal Credit taper offsets just under half of the impacts of Covid-19 for the bottom two quintiles of the household income distribution. These measures have smaller positive impacts for the third and fourth quintiles, and almost no impact for the top quintile. The NICs increase reduces net incomes most in the top quintile, which makes sense given that the increase is effectively a flat percentage levy on earnings (and self-employed income) above the Primary and Secondary Thresholds (and Lower Profits Limit).

It is important to note that the results in Figure 1 are averages by income quintile and will conceal a lot of variation in the outcomes for benefit units in each quintile. For example, non-working UC claimants or many of those working only a few hours a week do not benefit from the UC taper reduction.

Figure 5.2 shows the impact of the reductions in the value of public services due to Covid-19 (pink bars), the mitigation measures (if all four suggested measures are enacted together – blue bars) and the NICs and UC taper changes (yellow bars) as a percentage of final income (net income plus the value of public services received in the baseline scenario – as explained in Chapter 6 of the previous report). The black line with diamonds in the Figure shows the overall distributional impact of all tax, welfare and spending changes since 2010 excluding Covid-19, any proposed mitigations and the recently announced NICs and UC changes (as presented in Chapter 6 of the previous report). The green line with circles is the total distributional impact as a percentage of final income *including* Covid-19, mitigations and the NICs and UC changes.

Figure 5.2. Distributional impact of all tax, welfare and public spending changes since 2010, plus impact of Covid, mitigation measures (if whole package enacted) and NICs and UC changes by household income quintile:

percentage of final income



Source: Landman Economics Tax-Transfer Model (for analysis of all tax and welfare measures including mitigation options and NICs and UC changes); Landman Economics Public Spending Model (for analysis of public spending measures, and impact of Covid-19).

Figure 5.2 shows that our proposed mitigation measures do not fully compensate households for the impacts of Covid-19 even in the lowest quintile. However, the measures are relatively well targeted on the poorest 40% of the income distribution. The total distributional impact of tax/welfare and other public spending changes remains regressive as a proportion of final income when Covid-19 and mitigation measures, plus the NICs and UC changes, are taken into consideration. Overall percentage losses are around 9% of final income for the poorest two quintiles, but approximately zero for the top quintile.

5.4 Distributional impacts by benefit unit type

Figure 5.3. Distributional impact of Covid-19, mitigation options and NICs and UC changes by benefit unit type: cash terms

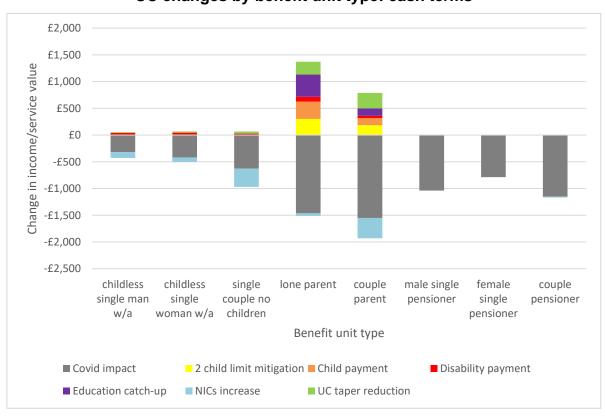


Figure 5.3 shows that the package of mitigations and the reduction in the UC taper are strongly focused on families with children, with lone parent families gaining the most (almost enough to fully offset the estimated impact of losses from Covid-19 on average). For couples with children, the mitigations offset around one-third of losses from Covid on average, but this group also loses out from the increase in NICs by a lot more than the lone parents group.

The increase in NICs also affects single working-age couples with no children more than childless single people (mainly because a high proportion of childless couples have two people in work and so the benefit unit is hit twice by the NICs increase). As shown, the NICs increase has no impact on pensioners (because they are exempt from employee and self-employed NICs) but it will have some impact when it is converted into a health and social care levy from 2023-24 onwards (not modelled here).

Figure 5.4. Distributional impact of all tax, welfare and public spending changes since 2010, plus impact of Covid, mitigation measures (if whole package enacted) and NICs and UC changes by benefit unit type: percentage of final income

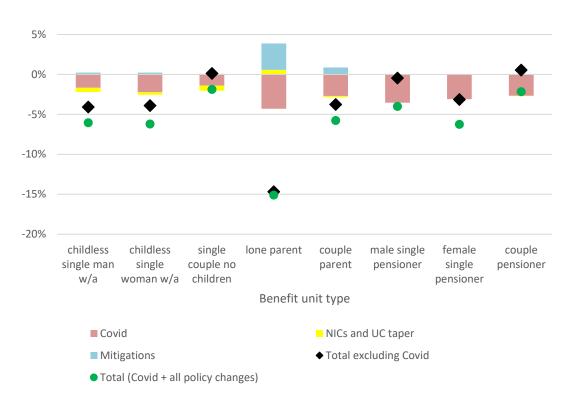
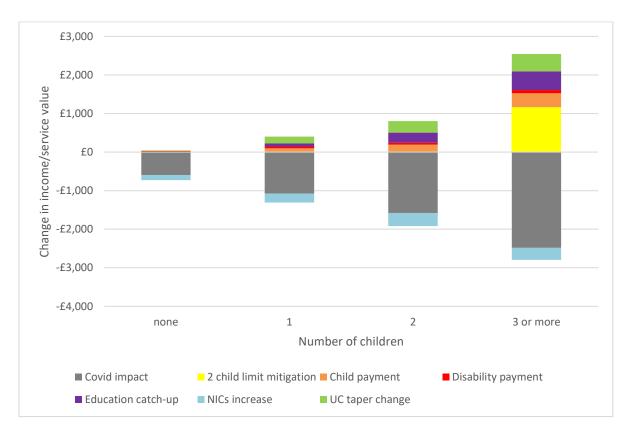


Figure 5.4 shows that lone parents lose out (on average) to a far greater extent than other benefit unit types from the overall package of tax/welfare and spending changes since 2010. The compensating impact of the mitigation measures and the UC taper change mean that their position does not deteriorate further as a result of Covid-19. By contrast, other groups see net losses from Covid-19 even after taking mitigations into account.

Lone parents' average losses are around 15% of final income after taking Covid-19, mitigations and the NICs and UC changes into account. Childless single men and women, couple parents and female single pensioners also lose more than 5% of final income on average.

5.5 Distributional impacts by number of children

Figure 5.5. Distributional impact of Covid-19, mitigation options and NICs and UC changes by benefit unit type: cash terms



Source: as Figure 5.1

Figure 5.5 shows that the package of mitigations and the UC taper change are most effective for families with three or more children, offsetting almost the whole of the combined impact of Covid-19 and the NICs increase on average. The mitigations and UC taper change also offset a smaller proportion of the losses from Covid-19 for families with one or two children. To a large extent this is because the offset of the 2-child limit on social security payments, which is the most expensive of the mitigation options, is targeted by definition on families with three or more children.

Figure 5.6. Distributional impact of all tax, welfare and public spending changes since 2010, plus impact of Covid, mitigation measures (if whole package enacted) and NICs and UC changes by benefit unit type: percentage of final income

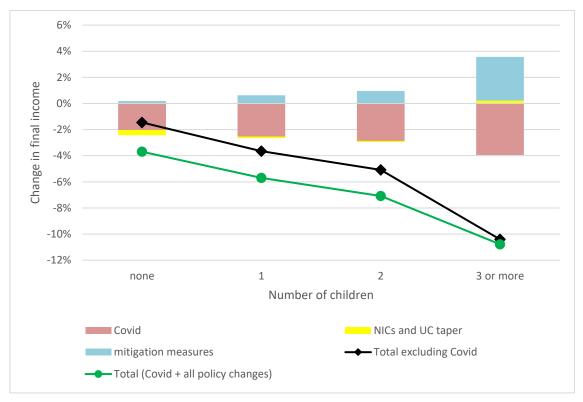
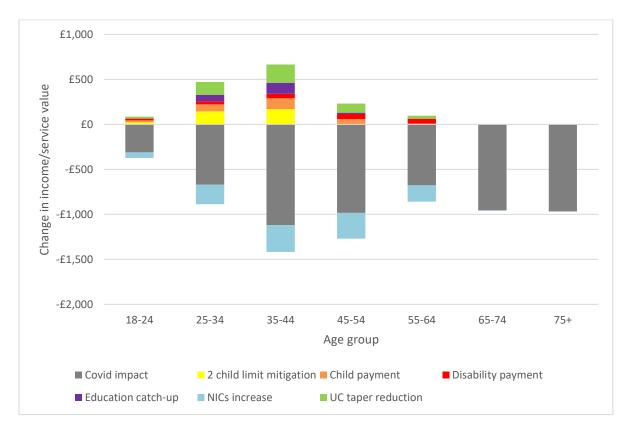


Figure 5.6 shows that the overall impact of all tax/welfare and spending changes is still larger for families with more children when Covid-19, the mitigation options and the NICs and UC changes are taken into consideration, but the gradient is somewhat less steep than before they are considered. This is primarily because the mitigations package is particularly targeted on families with 3 or more children. Including the impacts of Covid-19 and all mitigations and NICs & UC changes, childless BUs lose just under 4% of final income on average compared to around 11% for families with 3 or more children.

5.6 Distributional impacts by age of adults

Figure 5.7. Distributional impact of Covid-19, mitigation options and NICs and UC changes by average age of adults in benefit unit: cash terms



Source: as Figure 5.1

Figure 5.7 shows that the package of mitigations and the reduction in the UC taper have the largest positive impact for families where the average age of adults is 35 to 44 years (with the next largest impact in the 25-34 age group). Around 60% of losses from Covid-19 are offset for each of these groups, with smaller proportions offset for the 45-54, 55-64 and 18-24 age groups. The mitigations do not improve outcomes for pensioner age groups. The NICs increase has the largest negative impact for the 25-34, 35-44 and 45-54 age groups (while not affecting pensioners).

Figure 5.8. Distributional impact of all tax, welfare and public spending changes since 2010, plus impact of Covid, mitigation measures (if whole package enacted) and NICs and UC changes by average age of adults in benefit unit: percentage of final income

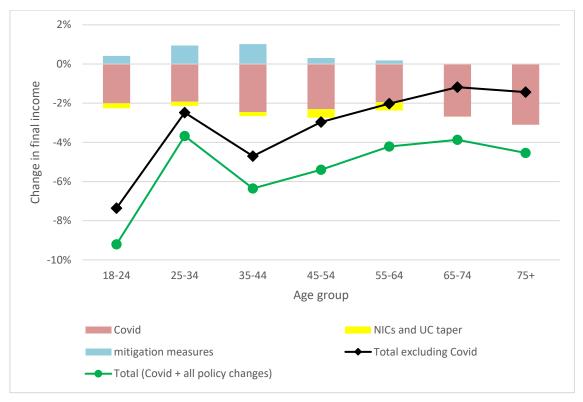
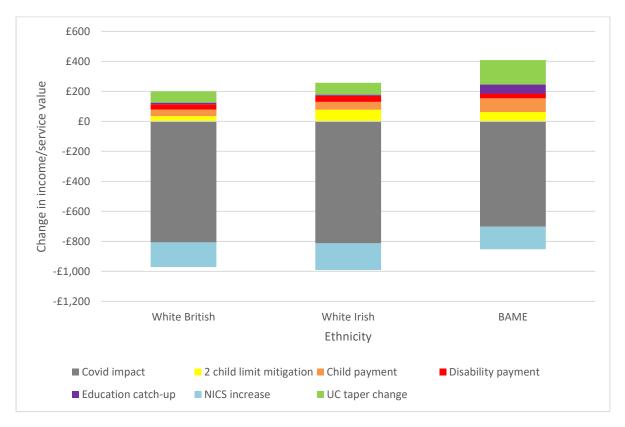


Figure 5.8 shows that the group where the average age of adults is under 25 still experiences the largest losses as a percentage of final income of any age group. After taking Covid-19, the mitigations package and other changes into consideration, the average loss in the group is just over 9% of final income. The 25-34 year-old age group has the smallest average losses (around 3.5% of final income), followed by 65-74 year-olds (around 4%). This is a change from the pre-Covid and pre-mitigation pattern of results where adults aged 65 and over had the smallest net losses of final income in percentage terms. The group where the average age of adults is 35 to 44 also loses out particularly badly when Covid-19, mitigation and other changes are considered (by around 6.5% of final income on average).

5.7 Distributional impacts by ethnicity/nationality

Figure 5.9. Distributional impact of Covid-19, mitigation options and NICs and UC changes by ethnicity/nationality of benefit unit: cash terms



Source: as Figure 5.1

Figure 5.9 shows that the average impacts on White British and White Irish BUs are very similar. The mitigations package plus the UC taper change offsets about a quarter of the losses from Covid-19, but both groups also lose out by just under £200 per year from the NICs increase. The pattern for BAME is somewhat different with the mitigations plus the UC change offsetting a larger proportion of the Covid-19 losses (about 40 per cent), and slightly smaller average losses from the NICs increase.

Figure 5.10. Distributional impact of all tax, welfare and public spending changes since 2010, plus impact of Covid, mitigation measures (if whole package enacted) and NICs and UC changes by ethnicity/nationality of benefit unit: percentage of final income

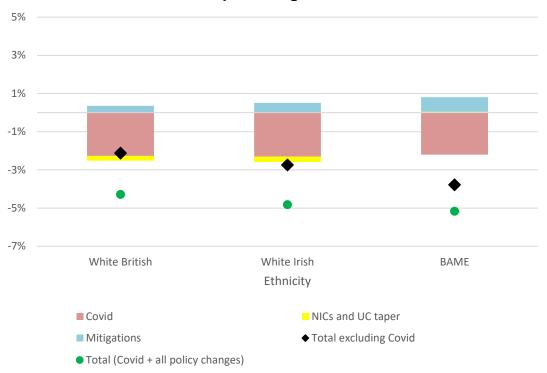
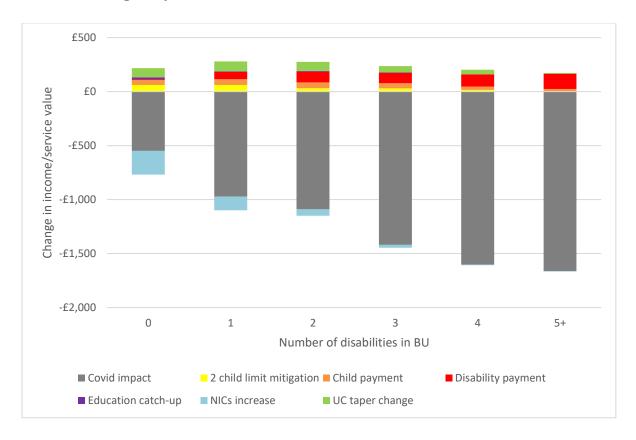


Figure 5.10 shows that the overall impacts of all impacts of all tax, welfare and public spending changes as a percentage of final income after taking into account Covid, mitigations and UC/NICs are slightly worse for White Irish benefit units than White British benefit units (losses of just under 5% compared to just over 4%) and slightly worse for BAME benefit units than either of the other groups (losses of just over 5%).

5.7 Distributional impacts by number of functional disabilities of adults in benefit unit

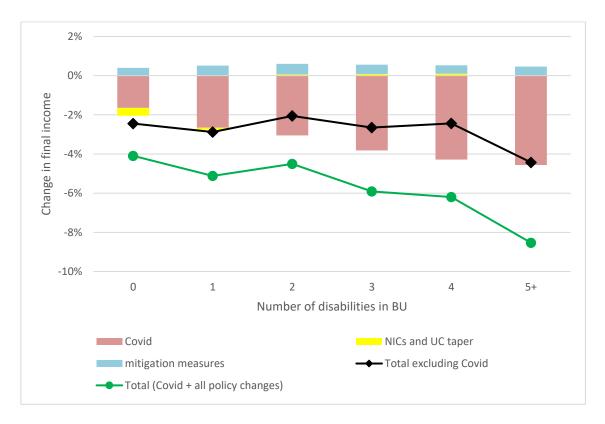
Figure 5.11. Distributional impact of Covid-19, mitigation options and NICs and UC changes by number of adult disabilities in benefit unit: cash terms



Source: as Figure 5.1

Figure 5.11 shows that the mitigation payment to disabled adults who claim Universal Credit or legacy benefits is well targeted on benefit units with a high number of adult disabilities, but only offsets a small proportion of their losses from Covid-19. The other mitigation measures and the UC taper change have a larger positive impact for benefit units with *fewer* adult disabilities. The increase in NICs has a larger negative impact for benefit units with fewer adult disabilities, with the largest impact for non-disabled benefit units.

Figure 5.12. Distributional impact of all tax, welfare and public spending changes since 2010, plus impact of Covid, mitigation measures (if whole package enacted) and NICs and UC changes by number of adult disabilities in benefit unit: percentage of final income



Finally in this chapter, Figure 5.12 shows that taking Covid-19 and the mitigation measures and UC and NICs changes into account exacerbates the extent to which benefit units with greater numbers of adult disabilities lose more from the tax/welfare and spending changes (including mitigations and NICs/UC changes) than non-disabled BUs or BUs with fewer disabilities. Benefit units with 5 or more functional disabilities lose an average of around 8.5% of final income from all changes, compared to 4% for non-disabled benefit units.

5.8 Summary

- The package of mitigation measures plus the change to the Universal Credit taper offsets just under half of the impacts of Covid-19 for the bottom two quintiles of the household income distribution. The measures have smaller positive impacts for the third and fourth quintiles, but no impact for the top quintile. By contrast, the NICs increase has the biggest negative impact for the top quintile.
- The total distributional impact of tax, welfare and other public spending changes remains regressive as a proportion of final income when Covid-19, mitigation measures and the NICs and UC changes are taken into consideration.
- The package of mitigations and the reduction in the UC taper are strongly
 focused on families with children, with lone parent families gaining the most
 (almost enough to fully offset the estimated impact of losses from Covid-19 on
 average). However, lone parents still lose out (on average) to a far greater
 extent than other benefit unit types from the overall package of tax/welfare
 and spending changes since 2010.
- The package of mitigations and the UC taper change are most effective for families with three or more children, offsetting almost the whole of the combined impact of Covid-19 and the NICs increase on average. However, families with three or more children still lose an average of around 11% of final income from all tax, welfare and public spending changes, including Covid-19 and the mitigation and other measures assessed in this Chapter.
- The package of mitigations and the reduction in the UC taper have the largest positive impact for families where the average age of adults is 35 to 44 years (with the next largest impact in the 25-34 age group).
- The group where the average age of adults is under 25 loses out more from the full package of changes (including Covid-19, mitigation measures, and the Universal Credit and NICs changes) than any other group, with average losses of around 9% of final income.
- The average impacts of the mitigation package, the UC taper change and the NICs increase for White British and White Irish benefit units are very similar.

- For BAME benefit units, the positive impact of the mitigations and the UC change is larger than for the other two groups.
- Taking Covid-19 and the mitigation measures and UC and NICs changes into
 account exacerbates the extent to which benefit units with greater numbers of
 adult disabilities lose more from the tax/welfare and spending changes
 (including mitigations and NICs/UC changes) than non-disabled BUs or BUs
 with fewer disabilities. Benefit units with 5 or more functional disabilities lose
 an average of around 8.5% of final income from all changes, compared to 4%
 for non-disabled benefit units.

6 Conclusions and Recommendations

6.1 Conclusions

This report has estimated the potential impact of the Covid-19 pandemic on public services in Northern Ireland, focusing on health, social care and education as the services most affected. The precise scale of the negative impact of Covid-19 on public service delivery – in particular the long term impacts of the diversion of NHS capacity to treating Covid patients, and the impacts of school lockdowns on children's educational attainment – are unlikely to be known for several years, at least. However, the results from Chapters 4 and 5 of this report – using reasonable assumptions about the size of the impacts of Covid-19 – show some clear distributional patterns. First, the average cash impact of service reductions resulting from Covid-19 is fairly even across the bottom 80% of the household income distribution. This means that, as a percentage of final income (net income plus the value of services received), the impacts of Covid-19 are distributionally regressive, hitting poorer households harder than rich households. Second, families with children – and especially those with disadvantaged children (e.g. those eligible for free school meals) lose out particularly badly because of the impacts of Covid-19 on education provision. Third, the need to divert substantial NHS resources to treating Covid-19 patients results in reductions in service provision for particular groups – especially disabled adults, and pensioners. The pandemic has exacerbated the already very serious problem with capacity in the Northern Ireland NHS.

In terms of priorities for additional funding during the recovery from Covid-19, health (and social care) and education are the obvious priorities. Our view is that there is a clear case for additional funding for both service areas, but if we had to pick just one top priority it would be additional education funding. Although the Northern Ireland NHS faces substantial challenges it has received much more generous funding settlements than Northern Ireland schools over the last decade, and the UK Government has acknowledged the need for more resources for the NHS across all four UK countries, with the NHS in England receiving a real terms cash increase of 4.1% per year over the period covered by the October 2021 Spending Review

(Anadaciva, 2021) and additional allocations for Northern Ireland under the Barnett formula (Northern Ireland Office and HM Treasury, 2021). In contrast, the UK Government has refused to fund an adequate catch-up fund for education; the government's education recovery commissioner resigned from his role in June 2021 after his proposals for a £15bn long-term catch-up programme for children whose learning has been disrupted by the pandemic were scaled back to a less than £2 billion (Weale and Adams, 2021). This is why we have recommended a 15% increase in schools funding for pupils eligible for free school meals as one of our proposed package of mitigation measures.

Meanwhile, the Universal Credit changes announced in the October 2021 Budget have a progressive impact on low income families but will not help families who are not in work. Two of our four mitigation measures propose increased payments for families with children. The ending of the 2-child limit on Universal Credit, tax credits and Housing Benefit payments is probably the most important of these, given the extent to which families with three or more children lose out from Covid-19, reinforcing the pattern of losses from tax, welfare and public spending changes since 2010 modelled in our previous report (Reed and Portes 2021). An additional payment for low-income families with children would also help offset some of the regressive impact of Covid-19 on public services.

Finally, our modelling shows that Covid-19 has a negative impact on people with disabilities, with larger losses for adults with a greater number of functional disabilities. Disabled people in Northern Ireland have in many respects suffered both from cuts to benefits since 2010 and reductions in spending on most public services since 2010, but the results in our previous report showed that these overall impacts were partially masked by real terms increase in NHS funding, which dominated the distributional breakdowns by disability status. The negative impact of Covid-19 on health and social care service provision has exacerbated the extent to which disabled benefit units suffer losses from the changes since 2010 overall, and reveals a clear case for additional benefit payments for disabled adults on low incomes, in particular.

6.2 Recommendations

We recommend that the Northern Ireland executive:

- Funds a mitigation package consisting of a mix of increased benefit payments
 and increased schools spending to offset the worst impacts of Covid-19 on
 public services provision and living standards. The package of mitigation
 measures set out in Chapter 5 is a good starting point; the precise details of
 the mitigation package should be drawn up after consultation with affected
 groups and stakeholders.
- Conducts additional research on the impacts of the Covid-19 pandemic on public services provision. A mix of qualitative and quantitative survey evidence would enable a more detailed assessment of how Covid-19 has affected public services.

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Appendix

Table A.1: trends in proportion of adults with any long-standing health problem (Northern Ireland only)

Age group	2018 q2	2019 q2	2020 q2	2021 q2
Under 40	17.8%	19.2%	19.5%	22.5%
40 to 59	33.9%	34.3%	34.4%	33.5%
60+	55.9%	54.4%	55.1%	53.9%

Source: author's analysis of Northern Ireland component of Labour Force Survey