# How England first managed a national infection crisis: Implementation of the Plague Orders of 1578 compared with COVID-19 Lockdown March to May 2020

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## ARTICLE INFO

## ABSTRACT

The current COVID-19 pandemic and lockdown in the UK have parallels with the first ever national management of epidemic infection in England, the Plague Orders of 1578. Combining historical research of the Tudor and Stuart periods with information sources and broadcast news as the epidemic in England unfolds in real time during lockdown, the areas of official guidance, epidemiology, social distancing and quarantine, financing measures, the national health service and fake news are compared. Then as now, limits on freedom of movement and congregation, social distancing and quarantine measures were applied for the sake of preserving life, loss of livelihood ameliorated by government loans and inconvenient opinions suppressed, and these suggest a commonality of organised responses to mass infection across times. Increased danger in certain necessary occupations and flight to second homes by the rich have been observed, health inequities uncovered and restrictions on being with the dying and burying the dead enforced. Wholly unprecedented in comparison with the past, when the wealthiest in a parish were taxed to pay for measures against plague, is the quarantining of the whole society and the financial package for workers on furlough to avoid mass unemployment. In the new normal after lockdown, people should be given more credit for sophisticated understanding than was allowed in past centuries, when fear and punishment coerced the majority to conform, and be allowed access to relevant information which will influence decisions about national and community life going forward after lockdown.

## 1. Introduction

1.1 With the global population now oppressed by coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), thought to have spread to humans from bats via a live animal market in Wuhan, China, it is inevitable that infamous pandemics of the past are recalled and recounted, such as the Black Death or plague which first hit Europe in 1348, and the global Spanish flu immediately after the First World War in 1918. Here, I will focus on the plague, like COVID-19 a zoonotic disease, and caused by the bacillus *Yersinia pestis*, transmitted among rodents and from rodents to humans by the bite of infected fleas as bubonic plague, or by inhalation of bacilli or their contamination of skin abrasions as pneumonic plague (The pest anatomized: five, 1985). There have been three plague pandemics: the first, the Justinian plague of the Mediterranean basin which began in 541

CE and continued to recur into the eighth century; the medieval Black Death, which started in 1347 when Genoese inhabitants of a Crimean town escaped besiegement but not infection by forces of the Kipchak khanate across the Black sea into Europe, the disease devastating the continent, reaching England in May 1348, and remaining there until 1666; and a modern pandemic originating in China in 1894 and still ongoing in Africa and America but with a reduced effect on human populations (Raoult et al., 2013). Instances of this modern pandemic in the British Isles include an outbreak of bubonic plague in Glasgow in 1900, infecting 36 and killing 16; three outbreaks of pneumonic plague and two outbreaks of bubonic plague in Suffolk between 1906 and 1918, believed to have resulted from ships arriving from the Black Sea and the Americas on the Rivers Orwell and Stour, with 12 of the 14 pneumonic plague victims dying, 3 being bacteriologically confirmed cases of plague; and a single laboratory-acquired case of pneumonic plague occurring at Porton Down in Wiltshire in 1962 (Egan, 2010).

The pandemic of COVID-19 taken with epidemics of plague invite comparisons of degrees of contagion and numbers of people killed, as a

measurement of the relative deadliness of each pestilence. It is thought that the population of Europe in the mid-fourteenth century was reduced from 80 million to 30 million by bubonic plague and the population of England in 1400 was half what it was before the plague (Black Death Facts, 2020). By the end of the Spanish flu pandemic, the death toll in Britain was 228,000, and a quarter of the population are thought to have been infected. No country was untouched by the 1918 pandemic, although the scale of its impact, and of government efforts to protect their populations, varied widely (How they tried to curb Sp, 1918).

1.2 Estimated death tolls from epidemics are compared under the *Microbe-Scope*, featuring a table which pits deadliness against contagiousness, a measure of the average basic reproduction number ($R_0$), that is, the average number of secondary infections produced by a single infected person (McCandless et al., 2020). Under the *Microbe-Scope*, it can be seen that pneumonic plague scored 100/3 on the deadly v contagious axes: 100% mortality because airborne spread of the plague bacilli is particularly efficient, with 3 people estimated to be infected by each source. More common in epidemic form throughout Early Modern Europe was bubonic plague which possesses a similar $R_0$ value but a deadliness of only 60%. In contrast, Spanish flu was rated deadly to 5% of those infected and with an $R_0$ of 2.2. COVID-19 has been tentatively plotted on the chart at slightly lower than Spanish flu on each of the axes. Other research put the real-time effective reproduction number for several European countries in the range 3.10–6.56 (McCandless et al., 2020).

1.3 The objective of this study, undertaken during lockdown against the COVID-19 epidemic in England from 23 March until May 14, 2020, is to explore national management strategies for containing the spread of infection among the population by comparison with those measures enacted by the Privy Council of Elizabeth I for coping with epidemics of plague in England and to safeguard the health of the population. This first ever English national strategy was contained in the Plague Orders of 1578. These Orders were published with a second document of advice written by members of the College of Physicians of London on a range of preventive measures and remedies and treatments once infection had occurred, for both rich and poor. The Orders were reprinted several times, on occasions of serious outbreaks of the plague, and were rewritten only after the Great Plague of 1665, which was ironically the last major outbreak of plague in the British Isles. Thus, the Orders and their accompanying medical advice represent the sole documented strategy of management of an epidemic of plague drawn up by those living through it. The physicians' advice was importantly expanded in 1630. I discuss this and other aspects of the Plague Orders in the language of today's COVID-19 epidemic, under the headings of official guidance, epidemiology, social distancing and quarantine, financing measures, health inequalities and the national health service and fake news. The intention is to explore similarities and differences between the historical settings and today which may suggest inevitable consequences to be faced in any epidemic, or how we have managed or might handle the social and economic management of the country under such conditions which can help us in the present predicament.

## 2. Materials and methods

2.1 The kernel of the historical material presented here was included in a chapter of a doctoral thesis completed in 2017, which analysed the medical advice of the Orders through a coupling of a rigorous historiography involving source criticism of historic texts and empirical knowledge of the pharmacy described. The present COVID-19 epidemic brought to mind the historical material and suggested the comparison; for, the current global health emergency is the first within living memory and the social control measures introduced go far beyond methods for combatting the outbreak of swine flu 2009, when there was no widespread infection and early action to vaccinate priority patients and frontline health workers proved sufficient (The Guardian, 2009).

2.2 The historical material has been expanded and updated by studies obtained in a search on the JSTOR database using the terms 'plague orders' and 'England', and limited to sources from 1985 to 2020, the earlier date being the year of publication of Paul Slack's classic account of plague in Tudor and Stuart England (Slack, 1985). Sources for understanding the current pandemic are news outlets such as BBC and London Broadcasting Corporation (LBC), UK national newspapers, websites such as Imperial College London COVID-19 Reports and the Office for National Statistics, news feeds and links from Pulse Today, The Alliance for Natural Health International, The Conversation and other academic sources, and personal communications and discussions with academics and clinicians (Imperial College London). The comparative analysis is divided into sections titled using the vocabulary of the present epidemic in the belief that these terms heighten the historical reality of what took place four centuries ago and facilitate comparison with the present.

## 3. Results

### 3.1. Plague orders and official guidance

"houses are left desolate … we are afraid of one another, men hardly trust them selves, yea, scarcely the clothes of their back. Where are our solemn meetings, and frequent assemblies; men stand afar off; the streets and highways mourn: traffic ceaseth: merchandise decayeth; the crafts man and cunning artificer is ashamed of his poverty." (Achinstein, 1992)

3.1.1 England is just about to take its first steps out of the lockdown imposed on March 23, 2020, as restrictions on movement and meeting family members are relaxed after more than seven weeks and those unable to work at home are encouraged back to their place of work. The compliance of the population to the lockdown limitations, despite the hardships endured, has been broadly praised and its mantra of 'stay at home, protect the NHS, save lives' widely supported, undoubtedly owing to the natural fear that the epidemic has created and the novel circumstances outside of living memory. Appeals to the national community spirit evinced during the Second World War have been made in the hope of maintaining calm during the epidemic. The damage caused by lockdown on the economic and mental health of sections of the population remains to be calculated. In contrast, the Plague Orders which Elizabeth I's government published in 1578 were enacted slowly and fitfully, not least because they lacked the power of statute until James I came to power, and were temporary, being re-imposed at each significant outbreak of bubonic plague (Orders and thought meete by, 1578). Lockdown in 2020 is also temporary and restrictions being loosened in May in England are revealing differences in the management of social distancing in the four countries of the United Kingdom with the potential to spread confusion and undermine the credibility of decisions of governments (BBC News, 2106).

3.1.2. It took quite some time for measures devised by the governments of Tudor monarchs to have any impact on plague epidemics. Measures such as the order to shut up infected houses for forty days were widely declared by 1550, but barely enacted, mainly due to a lack of collective will or the resources to maintain them. Then as now, the country was slow to get off the mark to deal with an epidemic. In a few towns and cities, more energetic measures were taken: a bye-law of 1540 in Liverpool required the infected to live in cabins on the heath in summer and stay at home with windows and doors shut in winter; in York in 1550, watchmen were stationed on Ouse bridge to prevent the movement of infected people across the city, while in Exeter in 1564, they were kept off the street entirely. In London, aldermen dragged their feet, especially over the imposition of plague taxes on the rich, and none were made compulsory. Only after 1563 were infected Londoners shut up and watchers and searchers for the dead employed, usually poor women of the parish, for it was women who customarily laid out the dead. Difficulties remained, however, because of too elaborate a political and administrative structure in the capital rather than by one too primitive in

provincial towns (Slack, 1985; Thorpe et al., 2019).

3.1.3. When plague appeared to have attained a continuous presence in London in the period 1577–82, William Cecil, Queen Elizabeth's chief adviser and Secretary of State, imposed nationwide preventive measures and treatment for the infected of every social group in order to lessen the spread of the pestilence (Slack, 1980a). This was 'specially directed and commanded by her Majestie upon the princely and natural care shee hath conceived towards the preservation of her subjects, who by very disorder, and for lacke of direction do in many partes wilfully procure the increase of this general contagion' (Orders and thought meete by, 1578). As with the COVID-19 pandemic today, example and precedent for protecting the health of the population came from Northern Italy. Documents concerning the management of outbreaks of plague there had previously been shared with the Privy council after a severe outbreak of Plague in Milan in 1576–77 which may have killed 18% of the population. The councillors heard of Milan's substantial pesthouse, the lazaretto di San Gregorio, which was able to accommodate thousands of plague victims. In 2020, movement into and out of Milan was restricted to those who had been issued with a license to do so, a condition repeated across the whole of Italy from March to May (Basing & Rhodes, 1997; The Daily Express, 2020). In England, reports of Italian hospitals unable to cope with the numbers of seriously ill citizens prompted the construction of large scale, critical care 'Nightingale' hospitals in seven towns and cities, a provision non-existent four centuries earlier.

3.1.4. The Plague Orders drawn up in 1578 were posted throughout England, in marketplaces, parish churches and local chapels, where they were read out or proclaimed for the benefit of illiterate parishioners (Totaro, 2010). They comprised seventeen stipulations for the management of plague outbreaks in all hundreds of each county of England, covering the imposition and collection of a plague tax, the appointment of watchers of quarantined houses, viewers of the dead and burial parties and arrangements for how these officials might be recognised on the street and avoided, suppliers of food and drink to those 'shut up' in their homes, the punishments for those breaking quarantine, the local availability of remedies for plague, the suppression of 'dangerous opinions' and the burning or washing of the bedding and clothes of those dead from pestilence. The government held the opinion that plague increased 'rather by the negligence, disorder and want of charity in such as have been … infected … than by corruption of air' (Orders and thought meete by, 1578). Because the miasmatic theory of plague, which held that some places would be more likely to harbour infection than others, 'the earth belching forth venomous vapours' caused by filth, overcrowding, excrement, stinking standing water and putrefying churchyards all polluting the air, was rejected by medical opinion in favour of a belief in contagion, social control was introduced throughout the country (Lord, 2014). Once a week, local magistrates were required by the Orders to collate a report on the number of deaths or recoveries in each rural hundred and whether the local town was infected with plague, all to be more centrally reported at the three-weekly meeting of magistrates organised in an uninfected place (Orders and thought meete by, 1578).

### 3.2. Epidemiology

3.2.1. There have been daily broadcasts of COVID-19 infection and mortality figures since the first UK cases were detected and in the wake of rapidly escalating levels of infection recorded in Europe and Asia. Government ministers convene to review measures to contain the spread of the virus every three weeks, curiously matching the frequency of meetings of magistrates required by the Plague Orders. Current figures from the government as at May 13, 2020 show that over 1.5 million people have been tested for coronavirus, of which 229,705 have tested positive and 33,186 have died (UK Government website, 2020). There is strong evidence from the Office of National Statistics that the elderly, the obese and those with underlying health conditions affecting immunity, cardiovascular and respiratory disease and diabetes are all more susceptible to serious consequences of infection. Those of black and Pakistani or

Bangladeshi origins are between 1.5 and 2 times more at risk from dying of COVID-19 compared to their white counterparts (The Office for National Statistics (ONS), 2020).

In comparison to present monitoring of deaths from COVID-19, no machinery was in place for counting the number of plague deaths nationally when the Orders were first implemented. Bills of mortality, seen as the first epidemiological data on diseases, had been requested in London as early as 1578, but were not composed until 1592 and not continuously until 1603. In Norwich, on the other hand, England's second city at the time, the number of burials in the city was reported every week to the Mayor's court from 26 June 1579 with few interruptions until 1646.

However, the historian Paul Slack attempted to quantify the extent of infection during the Tudor and Stuart periods not only for cities like London, Norwich, Bristol and Exeter, but also for the counties of Devon and Essex as exemplars of rural England, where around 90% of the population still lived, made possible by the fact that a large proportion of the parish records of these counties were available for study (Slack, 1985). Parish records had been introduced in 1538 during the reign of Henry VIII when Thomas Cromwell issued an injunction for the records of births, marriages and deaths to be kept. The parish records that exist in the counties of Essex and Devon and in the towns of Bristol and Exeter reveal the severity of epidemics in different parishes from the number of burials recorded, and Slack demonstrated a modern epidemiological approach in his calculation of a 'crisis mortality ratio' by dividing the number of burials in each parish in the years given by the annual average for the previous decade. The concentration of burials in a short period of time is suggestive of plague but it is hard to be much more precise and the data are otherwise limited in what may be extrapolated from them. Interestingly, for half the rural parishes studied, Slack estimated an outbreak of plague to be a once-in-a-hundred-year event. In Norwich and London, by contrast, the higher population and extant registers for the numerous parishes and the frequency of epidemics allows the plotting of both the distribution of high mortality and the way in which it changed over a range of years as a result of plague becoming a familiar part of urban life.

At least today, deaths from COVID-19, as defined, can be counted, even if daily or weekly figures released are not necessarily accurate and do not tally since they are subject to revision owing to a lag in establishing a positive COVID-19 test. Moreover, NHS England has prioritised the currency of mortality figures by limiting the count to hospital deaths only, a practice not being repeated in Scotland, Wales or Northern Ireland, where deaths in care homes and in the community are included, as they are in weekly counts for England published by the Office for National Statistics (NHS England, 2020). England's chief medical officer, Professor Chris Whitty, announced on BBC Television in April 2020 that a final reckoning would be possible only when full data were available for all-cause mortality in the period of pandemic, adjusted for age and other factors. Calculation of the numbers infected, however, remains very uncertain now as they were for plague victims in the earlier period. Figures are simply not available for the total populations of rural parishes of early modern England from which a deadliness value of plague epidemics may be calculated. At least there was a perception that a plague epidemic had a finite end with a flattening of the curve of infections as the epidemic, typically having persisted in warm, humid weather and into autumn, died down in the cold of winter, with another rise in deaths at the change of season the following spring. The degree to which the present lockdown, together with a track-and-trace system once it is implemented, can suppress the spread of COVID-19 and avoid the expected rise in cases in the autumn and winter remains to be seen.

3.2.2. The present government in Westminster insists that its policies are being guided by scientific and medical opinion, but they had initially refused to provide transparency on this issue by naming the members of their Scientific Advisory Group for Emergencies (SAGE), formed at the behest of the Cabinet office. Membership of that committee has now been made public, but studies used to inform policy have not, as if the

conclusions to be drawn from the data and translated into social policy were straightforward (The Guardian, 2020a). In the sixteenth century, it was the College of Physicians of London who acted as learned medical opinion to Queen Elizabeth and her government. The College published its medical advice in a document accompanying the Plague Orders, which is claimed to have had, of all the College's activities in the sixteenth century, the greatest impact on government health policy (Wear, 2000). The Orders and the medical advice were reissued together in those years when plague returned, until the advice was substantially revised in 1630. Bowing to pressure from the Privy Council to advocate political as well as medical solutions, the College now flagged, alongside a revised list of prescriptions, the adverse impact of overcrowding and poverty which endangered public health. These were also the concern of one of England's leading doctors of the time, the Frenchman Louis de Mayerne, who was also reporting to the government and favoured repression of all opposition to initiatives to combat these dangers. Unfortunately, the purposing of hospitals, provision of poor relief and expulsion of vagrants seen by de Mayerne in earlier years in Paris were not replicated in England; even quarantining was only being patchily enforced in 1630 and it still meant the locking up of the sick and the healthy together (Slack, 1980b, pp. 1–22).

At the start of the COVID-19 pandemic in the UK, Government policy in early March changed from a despairing belief that the COVID-19 virus could not be contained and that 'herd-immunity' had to be developed, to the imposition of a lockdown with fines for its infringement, in order to avoid the 250,000 deaths and the overwhelming of health services predicted to follow by one SAGE member, Professor Neil Ferguson at Imperial College London faculty of medicine (Imperial College London). A blanket policy of remaining at home makes no concession to the twenty-first century realities of poverty and overcrowding where some can neither work from home nor isolate themselves from older family members who are more vulnerable to infection. Other research shows that at least 80% of all transport operatives and health and social care workers are unable to work from home, while analysis from figures provided by Oxford University suggest that insufficient numbers have been infected with the virus for the outbreak even to be classed as an epidemic (ONS, 2020; The Daily Telegraph, 2020a). Understanding of the disease is still partial and insufficient, as it was for plague in past times: it is unknown how many mutations of SARS-CoV-2 already exist and whether different strains are more or less virulent, how many people have been infected, whether COVID-19 can be asymptomatic, who can pass on the infection and if someone who has had the disease is immune and for how long.

3.2.3. A further uncertainty concerns the identification of cause of death during a pandemic. In the past it was unclear whether the buried died of plague as opposed to other epidemic diseases in the Tudor and Stuart periods, such as typhus or smallpox. Reliance on the usual bubonic plague tokens of blue or purple 'spots or risings', namely buboes appearing in the armpits and groin, may not have accounted for all cases of plague since the bacillus may rapidly enter the bloodstream and produce a septicaemic form which kills the person before any buboes have time to appear (Slack, 1985). A third variety of plague, pneumonic plague, is thought to have been a prominent form of the infection only in the Medieval period when the death-rate was extremely high. An exception is hypothesised to have occurred in the Derbyshire village of Eyam during the plague of 1665, when infection entered the village in the flea-ridden clothes of a travelling tailor and plague spread gradually over 275 days before the villagers decided to quarantine themselves from the surrounding country, with a subsequent steep rise in mortality, resulting in over 75% of the population dying (Massad et al., 2004).

The parallel today is that it is not known how many people have contracted COVID-19, due to a lack of testing, and reports of people having had various symptoms suggestive of an infection remain unfathomable owing to limited information and the possibility that COVID-19 may present in atypical ways. One view is that COVID-19 may be diagnosed without tests from the presence of four symptoms, loss of smell or taste, severe or persistent cough, fatigue and skipping meals due to loss of appetite, but there is by no means a broad agreement that these symptoms are consistently present in those who have been infected (Spencer & Chan, 2020). The novelty of SARS-CoV-2 and the limited amount of clinical and epidemiological data on the virus currently restrains science-informed attempts to understand and manage the epidemic today nearer to the level of those previous historical efforts. Boris Johnson's government was slow to take appropriate action during the early months of 2020, as were Tudor monarchs and their governments in the period 1517–1577 when initiatives were piecemeal. Plague Orders were enforced from 1578 across the country but only had legal enforcement from 1604, whereas the Health Protection Regulations 2020, enacted in late March in a lockdown of society, appears to have been largely accepted and complied with by the British public through to its easing. One constant across the centuries is Windsor castle: Queen Elizbeth I and her court sought refuge there in the plague years of 1563 and 1592–3; Queen Elizabeth II removed there for lockdown in 2020. It remains to be seen if historical parallels continue and modern solutions mirror the policies of the 1630s, in what historians call the first period of health policing in England, when increased revenue to fund measures to combat plague was raised through more efficient taxation and quarantine and other social strategies were enforced to a higher level by the government of the self-confident absolutist monarch Charles I (Cook, 1989).

### 3.3. Social distancing and quarantine

3.3.1. Epidemics of infection throw into question the moral responsibilities of individuals to the communities in which they live. Death stalks the land and there is a tangible sense of fear and a desire to protect and comfort loved ones. In 2020, people have been asked to stay at home in their family units and distance themselves from others in the attempt to break the spread of COVID-19, spare the health service from being overwhelmed by the infected and consequently to save lives. These are the primary responsibilities placed on members of society and, to meet these, much of the workforce has been furloughed and businesses shut down; restaurants and cafes, cinemas and theatres, sports stadia, all places of social meeting have been closed, all public events cancelled. Foreign students and visitors are seeking repatriation. British society has been effectively quarantined since March 23, 2020, except to leave home briefly to obtain food or to exercise, when a 2-m distance from another person should be maintained. To compare this state of affairs with the past, I refer to a micro-history of a plague epidemic in Newcastle in 1636 which captures the minutiae of life in danger in an English town, and shows that when family members were quarantined together in their house, separation of the infected from the healthy could be managed where the size of the home allowed (Wrightson, 2011). Those crammed into inadequate housing were unable to maintain distance from the plague-ridden. This unfortunate discrepancy under plague between the haves and have-nots continues to play out with COVID-19 today, with the poorer households of the North not as able to socially distance as can the richer inhabitants of more leafy towns and villages in the South. Unlike the present, when the workers in those poorer households cannot work from home, the presence of the disease in seventeenth-century Newcastle did not constrain most of the community from pursuing their livelihoods: people still moved around, to find work if available, to obtain food and drink for themselves or for 'shutt up' neighbours which they would pass through barred doors and windows, and to carry out other necessary business. Some tradesmen's shops remained open, but many were closed, as is the majority of shops in this lockdown, and artisans and spinners no longer worked at their front door, when thresholds spelled danger instead of safety. Bread was still being baked and beer brewed but the city's markets no longer bustled with people. They must have been as astounded as we are to see our local high street devoid of shoppers. A challenge to our confinement at home this spring has been the fine weather in April and May: gardens have been a boon for those who possess one.

3.3.2. The business of Newcastle's master craftsmen, such as glovers, saddlers, plumbers and glaziers, were hit hard as households cut back on spending and purchased only essentials. Customers from further afield no longer appeared to buy their goods. Key industries, however, had to continue: the plague produced a sharp but temporary slump in Newcastle's maritime trade rather than a total stoppage, and this for the obvious reason that the coal trade was simply too important to many towns and cities including London, that depended on fuel supplies from the Tyne, for it to be abandoned. These seamen were among the front line workers of the past, as are our National Health Service (NHS) workers and emergency services personnel today, while the craftsmen of Newcastle are mirrored in today's service economy by those in the hospitality sector who have lost all their customers by government decree. At least many of these are furloughed, paid for not working, although those employed in the so-called gig economy and others who cross over into self-employed work have yet to be offered anything more than a deferral of tax on self-assessment accounts. Nearly 400 years ago, some free loans were available, as well as help and assistance from kind neighbours, but generally famine accompanied pestilence as households lost their income. Today we see something similar, when community support from food banks, already a scandal in 21st century Britain, has reached record demand in the pandemic (The Guardian, 2020b).

3.3.3. Keeping the disease off the streets to allow normal life to continue was one of the aims of the Plague Orders. In any house in town where a person had been certified by the viewers or otherwise determined to have died of plague, the occupants had to remain inside for a further six weeks (subsequently reduced to the standard 40 days or 'quarantine') in case the infection spread to neighbouring houses (Orders and thought meete by, 1578). A special mark of a red cross was made on the door of the house and printed papers with the words 'Lord have mercy upon us' fixed to the door post, an act first ordered by the Lord Mayor of London in 1574, who had to cancel his own Lord Mayor's day in 1578 because of the fear of plague (Basing & Rhodes, 1997). If plague had struck an inn or alehouse, its sign was taken down. If 'the infection happen in houses dispersed in villages', then members of an infected family might through necessity leave the home to do essential work 'for the serving of their cattel, and manuring of their ground' as long as they refrained 'publiquely or privately' from the company of others and wore 'some marke in their uppermost garments or beare white rods in their hands at such times as they shall goe abroade', by day or night. Failure to observe these rules led to the appointment of 'two or three watchmen by turns which shal be sworne to attend and watch the house'. Typically, 'watchers' oversaw several adjacent homes shut up (Newman, 2012). If they noticed the order being further infringed, this would be reported to the local justice of the peace who could have the offender 'imprisoned in ye stocks in the highway next to the house infected'. Viewers of the dead, whom members of the public would have been keen to avoid, were required to shun public gatherings and similarly mark themselves out, as were inhabitants of the town appointed 'to provide and deliver all necessaries of victuals, or any matter of watching or other attendance to keepe such as are of good wealth being restrained at their own proper charges, and the poor at the common charges' (Orders and thought meete by, 1578). These are our present-day supermarket delivery men, while those who come into close contact with the disease are denoted not by white rods in their hands but by personal protective equipment (PPE) covering their bodies, presuming they have been supplied with it. Many in social care are still without any PPE and have been dutifully attending the elderly and sick in their care without such protection, at a greater risk to both their own and their patients' health. The weekly Thursday evening clapping for NHS staff should be extended to this neglected group of health workers.

In order to keep infected people off the streets of England in 2020, everyone has been placed in a quarantine which has lasted 52 days. The remedies for maintaining this lockdown of the whole population are of course much milder than in the past. Once social distancing by isolation was able to be enforced through statue after 1604, watchmen or

'watchers' could use violence to keep people shut up, and use padlocks or board up doors and windows to stop escapees. Those found outside their places of confinement bearing the marks of plague infection might be treated as felons and hanged, although they were more likely to be punished as other members of the household found wandering outside but without the marks of plague, by being put in the stocks, whipped or fined (Slack, 1985). The legalised Plague Orders, renewed at every significant outbreak of plague, became perpetually enacted from 1641. In comparison, the British police have shown restraint in using their powers as a last resort against members of the public who fail to observe social distancing or staying in their local area and do not heed warnings from officers or are suspected of carrying the infection onto the streets. Fines have been imposed on rulebreakers, starting at £60 (reduced to £30 if paid quickly) for a first offence, which can be doubled for each repeat offence, up to a maximum of £960. By the end of April 2020, a total of 9000 fines for breaches of the coronavirus lockdown in England had been issued. The National Police Chiefs' Council (NPCC) announced at a press conference that there had been 391 reoffenders in England and Wales, among whom were one person handed six tickets, three people handed five, six handed four and 38 handed three. Most fines have been meted out to the under-35s. Data on ethnicity pointed to a "proportionate" set of fines in England, with 58% given to people identifying as white, 10% Asian and 4% black.[1] While overall crime has fallen during lockdown, reports of anti-social behaviour have increased massively: police have received reports of 194,300 coronavirus-related incidents. The basic fine is now increased to £100. there are concerns about further anti-social behaviour to come, notably disorder in pubs in celebrations over release from lockdown (The Independent, 2020).

3.3.4 So, lockdown has kept families at home, and reports of resulting increases in domestic violence and child abuse, the latter not being uncovered when children let slip a word to their teachers since schools are closed, are concerning. This represents one form of collateral damage from the public health measure. In seventeenth-century England, consistent collection of revenues to support the Plague Orders, coupled with the desire finally to separate the infected from the healthy, led to the construction of pesthouses to house plague victims. In many parishes, these were often no more than temporary wooden shacks outside town walls. These were modelled on the lazar houses once used to confine lepers and latterly to hold cases of syphilis but were expensive to erect and maintain and were always inadequate for accommodating the numbers of infected people (Slack, 1985). In the capital, five pesthouses of a more permanent construction appeared over the years to 1665 but accommodated no more than 600 inmates and could never meet the needs of London in a plague year, underlining the failure of this aspect of plague containment. London, indeed, posed massive logistical problems for managing isolation. Standard enforcement of quarantine was difficult, since the sick were too many to be watched anyway. If members of a family were in quarantine, their dogs and cats might be out infecting others, as was suspected then, and is now in the present pandemic (The Times, 2020). Meanwhile locked-up families were reported to suffer for want of food and medicines, leading observers such as one writer on the experience in London in 1665 to criticise the policy of isolation because of such collateral damage, where 'infection may have killed its thousands but shutting up hath killed its ten thousands' (Anon, p. 1665). The popular narrative on shutting people up during the plague outbreak of 1636 in London, evidenced in broadsheets of the time, concerned the

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[1] I am grateful to my peer reviewers for a Liberty Investigates report dated 17 June on the ethnicity of recipients of the 18,000 fines issued by that time, compiled from information provided through Freedom of Information requests, which reveals that BAME people were 54% more likely to be fined than white people in certain part of the UK, and suggests that some of the fines may have been issued unfairly there (https://libertyinvestigates.org.uk/articles/police-forces-in-england-and-wales-up-to-seven-times-more-likely-to-fine-bame-people-in-lockdown/. Accessed 21 December 2020).

cruelty and inequity of quarantine and the militaristic nature of its implementation (Newman, 2012). The concession to allow one member out of a closed house to go out for food was an early undermining of the policy of quarantine in the capital, and the policy, and the 1578 Plague Orders as a whole, were completely abandoned in the Great Plague of 1665.

Conversely, shopping for food is one of the 'reasonable excuses' for leaving the home in the present lockdown, together with exercising, visiting the doctor or accessing critical public services, providing care to a family member, fulfilling a legal obligation or commuting to work where the occupation cannot be performed at home (UK Government website, 2020). The list of exceptions denotes the social complexities of our post-industrial society compared with a pre-industrial one. Burying the dead, however, remains common to both. The Plague Orders required that burials should take place at sunset, to limit the number of attendees. The curate, if he was available, would see that the proper rites and ceremonies were observed while he held himself apart from the corpse and those who had carried it to the location designated in the parish for plague burials (Orders and thought meete by, 1578; An advice, 1578). Today we hear little in the news about the operation of undertakers or the health of vicars, but we are told that only close family members may be present at funerals. Friends can say their goodbyes only where no family members are attending. Resentment to such limitations to customs surrounding death were strongly voiced in the past, while now we hear of the suffering of relatives of the dying in not being allowed to sit with their loved one as they pass away on COVID-19 isolation wards, or of the elderly declining in the isolation of their sheltered accommodation and care homes.

3.3.5 An important measure for containment of disease in the global history of plague has been limiting its spread by travel. This meant the quarantining of shipping from infected ports, potentially a more effective strategy to combat the spread of plague than household isolation. Unfortunately, this also got off to a slow start in Tudor and Stuart England. Rudimentary before 1620, the policy introduced customs officials whose irregular periods of isolation for crews and cargoes proved ineffective in 1629 and 1635 but, when plague broke out in the Netherlands again in 1655, the constant flow of ships and goods from Amsterdam and other ports was contained by twenty-day quarantines and the airing of cargoes, the ships being halted at the mouth of the Thames despite complaints from the Dutch ambassador. Attempts to enforce the same protection in provincial ports were made and local successes achieved, such as measures taken against ships arriving in Hull from the Netherlands and London which prevented plague in that town between 1663 and 1665. Protection for London from infection from the low countries faltered in 1664, however, with disastrous results for the capital in 1665 (Slack, 1985). In the pandemic of 2020, it has been air travel into the country from foreign countries which likely seeded COVID-19 in the UK before any quarantine measures were put in place. Travellers on cruises have been detained on board where infection had broken out and there has been a rush to get back home from holidays taken at the time lockdown was announced. Some British holiday-makers have been stranded abroad because of local lockdowns, cancelled flights and an information blackout (The Guardian, 2020c).

### 3.4. Financing the measures to manage the epidemic

3.4.1. Accompanying the harsh but largely tolerated lockdown restrictions has been the government's generous furloughing of about 25% of the workforce to the tune of up to 80% of their salary up to £2500 a month. This measure, announced by the Chancellor Rishi Sunak on March 20, 2020, just before lockdown commenced, supports businesses which have had to close because of lockdown with the danger of staff redundancies and cashflow problems from collapse of sales (Chancellor announces work, 2020). The scheme is temporary, not least because it is so expensive. Nevertheless, the government has announced an extension of the measure until October 2020, after revealing that the job retention

scheme has protected 7.5 million workers and almost 1 million businesses. Over £14 billion in loans and guarantees have been made to businesses to support their cashflow during the crisis (Chancellor extends furlou, 2020). The scheme is currently costing the British government around £14 billion a month (The Guardian, 2020d) and the debt will have to be paid off in the years to come.

The generosity of the British Chancellor appears to match the intention of the Tudor Plague Orders which clearly specified that "according to Christian charitie, no persons of the meanest degree shal be left without succour and relief". The relief was funded by plague rates which were charged to the better-off citizens of an infected town or parish. This tax was to be assessed for each parish and collected as a lump sum or on an ongoing monthly basis and, along with segregation of the infected under quarantine or later pest houses, characterised the English response to the epidemic when compared with the management of plague in other European countries (Slack, 1985; Orders and thought meete by, 1578). Tax assessment to pay for the management of a plague epidemic was 'oven-ready' (to use a current expression) and available for immediate implementation, thanks to the introduction only six years earlier of the Elizabethan Poor Law: taxes already being collected to finance existing care provision for the indigent sick of a parish were increased in amount and frequency to help put in place locally the arrangements stipulated in the Plague Orders, including the payment of watchers of quarantined homes, viewers of the dead, purveyors of victuals to supply those in enforced self-isolation and the funding of preventive cordials and sweating medicines for the infected. The subsidised medical treatment was administered by barber-surgeons and apothecaries engaged by the parish or town, who could draw on the pages of learned antidotes and emergency treatments for plague of varying costs to suit all pockets, and "without charge to the meaner sort of people", provided by the College of Physicians of London (An advice, 1578). Implementation proved harder than the planning: from the very beginning the richest of any parish, on whom the special plague taxes fell, were typically absent and not readily available to pay the sum assessed at the time. The aldermen of London, indeed, had first argued that gifts and charitable donations would be sufficient, and it seemed reasonable to them to hope that the poor, who were more likely to become infected with plague from living in overcrowded houses outside the city walls, would not mind being shut up with the loss of their former life if they were given food and lodging by the parish. Consequently, the financial support for implementation of the Plague Orders was to remain inadequate for several decades. In contrast, once lockdown was decided upon by the present government, funds were borrowed at fortunately historically very low levels of interest to provide the necessary furlough scheme, and the NHS free at the point of use is treating the sick, reserving extra capacity in the Nightingale hospitals and meeting the undersupply of medical staff with calls for retired doctors and nurses to re-enter practice during the current emergency. Our health professionals do not run away from hotspots of COVID-19 infection, as did the physicians of England during plague epidemics in the train of their rich, aristocratic patients who had retreated to their country estates, emulating Galen's teaching to flee quickly far away and return slowly. Eight physicians did remain in post for the great plague in 1665, and it may be said in defence of the rest that continuing to administer to the sick was not seen as a requirement of that vocation in early modern England as it was for clergymen and magistrates to remain at their stations. Indeed, as Patrick Wallis has argued, a physician might feel he had discharged any duty perceived to apply to him by contributing to College's advice on treating plague and he should be left to attend to his own patients in the country (Wallis, 2006).

3.4.2 Social disadvantage, however, is just as prevalent now as in the past. The wealthy second-home owners today repeat the practice of flight: figures from Oxford University estimate that some 250,000 people fled London to their country houses before lockdown was imposed (The Daily Telegraph, 2020b). Meanwhile, the poor bear the brunt of COVID-19 infection as more of them died of plague centuries ago, when the causes of their susceptibility were judged to be insufficient means to

afford adequate housing and decent food with resulting weakened spirits and a body unable to resist the plague poison. Today, ten years of austerity has caused many families to be dependent on food banks for nutrition and to economise further by limiting the heating of their homes, with detrimental consequences for their sense of wellbeing. Figures from the Office for National Statistics (ONS) now show that those living in the poorest parts of England and Wales were dying at twice the rate of those in the richest areas (The Guardian, 2020e). Among the disadvantaged are poorly paid front line care workers, many of whom are also from black, Asian and minority ethnic (BAME) communities, who struggle to protect themselves from exposure to the infected. Out of recognition, then, for the impact of lockdown on the spirits and mental health of the population, the government issued early in lockdown an 'Easy-read guide to looking after your feeling and your body', but how much this was read and the extent to which helpful suggestions such as yoga and breathing exercises, growing plants in pots on your windowsill when you don't have a garden and the exhortation not to smoke made a difference is still to be reported (Public Health England, 2020). Four hundred years ago, the majority in the middle, neither rich enough to afford a second home, nor poor enough to receive free food and treatment, were most disadvantaged, especially the lower middling sort who were self-employed but soon ran out of money and could not afford the 4d. for daily parish support (as it was costed in 1636). Some took loans from the government which they had to pay back at a later date, whereas the cost of the furlough scheme today will have to be repaid by the British taxpayer. Overall, the self-employed of past times were financially impoverished by quarantine, by rules against renting rooms in a formerly quarantined house, spoiling of unsold perishable goods and loss of income but could continue to work if they showed no sign of infection (Newman, 2012). Today, we are seeing impoverishment of those working in the gig economy on zero-hours contracts or in tenuous self-employment who will not qualify for the generous furlough support provided by the present government and who either lose their income and their job, or continue to work as they can with increased risk of infection.

3.4.3. Plague, and COVID-19 now, are thus no great levellers of the population. The current pandemic is bringing into sharp focus the social and health inequities which exist in UK society. Historians such as Paul Slack and Margaret Pelling affirm that the several classes of English society had very different experiences during a pestilence, especially in relation to the severe English way of quarantine. There was a 'stark contrast between the spatial mobility of the socially privileged, on the one hand, and the unjust spatial confinement of the socially disadvantaged, on the other' which 'sparked a public controversy over well-to-do runaways, who were criticized for abandoning their social and charitable obligations to their parish communities in favour of selfish pursuits' (Foley, 2018). The 2020 pandemic has followed ten years of austerity in the UK, where the NHS and social care have been starved of cash and parts of England have been neglected by successive Tory governments in an unequal distribution of investment, provision and support.

### 3.5. A national health service

3.5.1. The mantra of the lockdown in Britain is 'stay home, protect the NHS, save lives'. The first order is to every individual to attempt to stop the spread of infection, for fear that hospital services for the acutely ill would be insufficient to cope, as has been reported to us from Italy. Likewise, the physicians' advice of 1578 assumed that plague was a kind of poison which might be spread from person to person, and therefore needed measures of social distancing of those remaining in town and enforced self-isolation of the infected to prevent the spread of contagion. Thus, 'it is good in going abroade into the open aire in the streets, to hold some things of sweete savour in their hands, or in the corner of a handkerchief, as a sponge dipped in vinegar and rosewater mixed, or in vinegar wherein wormwood or rue called also herbegrace hath bene boyled' (An advice, 1578). This is the sixteenth-century version of our face mask, which has been widely adopted in Japan, China and other

Asian countries, but not (yet) in Britain. Those made very ill by COVID-19 are transported to hospitals, the centre-stage for the caring of victims of COVID-19 throughout the world. There was no such provision for plague victims in Tudor England. The selfless care provided by British health professionals for the victims of this new disease, and in the knowledge that their colleagues in other countries have met their deaths from exposure to high viral loads from the infected, has gained nationwide appreciation of their bravery and dedication, as testified by the doorstep clapping up and down the country every Thursday at 8pm for the last several weeks.

3.5.2. Modern lifesaving healthcare contrasts starkly with the past, but some workers will have received plaudits in their time. Away from the apothecaries of London's Cheapside and Bucklersbury, who filled the prescriptions of the capital's physicians, the 'humble retailing apothecary' of a sixteenth century town fulfilled his professional and civic duties as a shop-keeper providing medicines during outbreaks of the plague as well as in the normal run of business (Roberts, 1964). Moreover, since funds provided under the Elizabethan Poor Law were often limited and overseers of the poor appointed in each parish had to economise on the cost of attending on the poor sick, and because expensive physicians were absent anyway, reliance largely rested on apothecaries and barber-surgeons to provide treatments (Hunting, 1998). Admittedly, English medicine then was very much behind the European curve, even if that standard tripartite division of medical services into physicians, surgeons and apothecaries had been established by mid-century, as more advanced systems for delivering healthcare and managing emergencies existed across the channel. Italy led the way: quarantine had been discussed in Venice as early as 1127; powerful boards of health were able to regulate movement and isolate the infected during epidemics in such grand structures as the lazaretto di San Gregorio already mentioned, and the information collected allowed sophisticated debate on whether self-isolating at home worked and how the disease actually spread (Newman, 2012; Slack, 1985). Many Italian physicians, in contrast to English ones, were not private practitioners but were engaged by town or city councils to look after its citizens, and for them the moral quandary of self-preservation versus duty to others presumably approximated to the challenge among some disadvantaged health practitioners today, who might rightly worry over caring for the infected without the appropriate personal protective equipment (PPE).

3.5.3. The poor who were sick with plague and qualified for care funded by the parish would have received those ministrations from other poor women, the equivalent of our modern-day, underpaid front line care workers. Monkhoff narrates a report dated 1582 of such women of one parish declining to look after plague victims, although it meant losing that income, and then one of them, Goody Henchpoole, changing her mind (Monkhoff, 2014). She was appointed a 'visitor' of quarantined houses – after 1593 she would have to swear an oath, for persons so appointed could order the quarantining of a house, and the punishment for failing to carry out their duties in a solemn manner was the more stringent for a sworn official – and a searcher of the dead who had to verify the cause of death of those in her care who had expired. Interestingly, the original manuscript version of the 1578 Plague Orders stipulated women for this role. The office of searcher continued until the Elizabethan Poor Law was replaced in 1834, and the findings of such women were entered in bills of mortality.

Stories of ordinary individuals like Goody Henchpoole help the imagination to grasp something of the reality of what going into the homes of those infected with bubonic plague might have been like. Yet, two ongoing, related and well reported scandals of the handling of the COVID-19 epidemic in the UK in 2020 has also exposed the vulnerable to the threat of death. Firstly, there has been a failure from the beginning to provide front-line medical and care staff attending to those sick with the virus with sufficient PPE, in the form of gloves, aprons and face masks (Ford, 2020). These workers have had to face 'unreasonable and unnecessary risk' in simply going to work and some have been threatened with the sack when they raise concerns. To their immense credit, they

have not refused to work because of lack of adequate protective equipment – it may well be the case that they, perhaps as it was for Goody Henchpoole, cannot afford to lose their job, no matter how poorly paid (Trades Union Council [TUC], 2020). Secondly, a 'hidden epidemic' of coronavirus was being reported in national newspapers as early as mid-April and by the end of the month Sir Kenneth Willett, NHS England's senior incident director for coronavirus, was reporting that the proportion of care-home residents dying had increased from 0.25% to 30% and he anticipated that care homes would become epicentres of transmission of the virus back into society (The Daily Mail, 2020). It is understood that COVID-19 patients recovering after intensive treatment in hospital have been moved to care homes to convalesce without clarification that they were no longer infectious and without adequate supervision of infection control where they were placed. Deaths from COVID-19 in care homes, where the most vulnerable are meant to be shielded from the epidemic, now account for 40% of all deaths from the virus. The Leader of the Opposition Sir Kier Starmer used Prime Minister's Questions on 13 May to ask Boris Johnson to account for an extra 10, 000 deaths in care homes over and above the monthly average added to those that have been attributed to COVID-19 (BBC News, 2606). It is a shuddering thought to imagine entering a quarantined house to find all occupants dead from the plague. How less shocking is it to hear today of multiple deaths in care homes in lockdown as a result of COVID-19 infection entering where adequate protection was not established.

### 3.6. Fake news

3.6.1 The phenomenon of branding media statements and reports as 'fake news' has now emerged into our global social-media-driven communication and it is no less present in information about the COVID-19 pandemic, particularly around unsubstantiated fears: that the new 5G network being rolled out has caused COVID-19 to appear in humans or that the SARS-CoV-2 virus was designed in the Institute of Virology laboratories in Wuhan, China, the city where it was first reported. The perceived need to repress certain views during a national health emergency, however, is not new, and was employed to protect the English way of quarantine. That strict isolation of the infected in early modern England contrasted with what was allowed in other countries: for instance, in the Netherlands visits to the sick were not only permitted but even encouraged, for the purposes of religious consolation and medical help, and inmates of infected houses were permitted to be out of doors to 'refresh themselves' as long as they carried distinguishing marks. By contrast, members of the Dutch and French churches living in London during the epidemic of 1636 were threatened with being locked up in the infected households which they visited out of Christian charity (Imperial College London). This was because the Plague Orders stipulated that any religious or lay person broadcasting the idea that it was uncharitable not to visit the sick, 'pretending that no person shall dye but at their tyme prefixed', was forbidden to utter such 'dangerous opinions upon paine of imprisonment' (Orders and thought meete by, 1578). The clause then reiterated the government's mantra of support for the needy and the sick in case the order might appear to undermine Christian charity. This moral dilemma from a religious past surely has a modern-day bioethical equivalent surrounding the effective isolation of the dying in Intensive Care Units in hospitals from their relatives who wish to comfort them in their final moments. The Health Secretary Matt Hancock recognised that being able to say goodbye to a loved one at the end of their life is 'one of the deepest human instincts' and promised to introduce new steps to 'limit the risk of infection' and allow farewells 'wherever possible', as a result of reports that hospitals and care homes had blocked visiting because of concern about spread of the virus (BBC News, 2020). This is partly driven, of course, by the fact of insufficient PPE available.

People who have also been denied the opportunity to visit or have held back from visiting a relative living in a care home for fear of infecting them may more acutely recognise the dilemma posed by the pamphleteer writer, Thomas Dekker, a social media commentator of

Jacobean England: which is worse, the danger of infection or the social isolation and lack of neighbourly care produced by household quarantine? (Hammill, 2011). Quarantine was seen to be antithetical to ideals of charitable community, especially to those who believed that plague was a punishment from God for past sins unrepented, and that its victims required Christian consolation. Charitable duties in the community had anyway changed in living memory during the turmoil of the English reformation of the sixteenth century in favour of the Protestant display of faith in God alone. We are similarly exhorted today to put our faith in the government and the guidance of science. Christian sensibilities are no longer dominant, but the wish to be present at the death of a loved one is timeless but often trumped in this modern pandemic by greater bioethical principle.

3.6.2. Methods of treating COVID-19 which lack an evidence base are also condemned as fake news today, as were notices of 'unapproved' cures for plague spread by handbills and condemned as false by doctors in the past. As across Europe, a plague epidemic presented opportunities for 'irregular' practitioners to divert from their other trades to concentrate on providing plague remedies, based on what they had gleaned from women and healers or read in one of the many plague tracts, and to build a reputation through the test of character and skill that treating the infected during an epidemic demanded. Cures touted for COVID-19 range today from plausible candidates to ridiculous imposters, from anti-infective herbs like garlic or colloidal silver, mustard oil or Lugol's iodine, to simply breathing in the hot air from a hair dryer, or just being able to hold your breath. During the Spanish flu epidemic, one fake cure, a sure preventative against influenza, was cocoa taken three times a day (How they tried to curb Sp, 1918), while the most off-hand recommendation to the poor in the physicians' advice of 1578 was butter, for it 'is not onely a preservative against the plague, but against all maner of poysons' (An advice, 1578). The purveyors of unapproved remedies for COVID-19 make their sales pitch at a safe distance across the internet; it is hospital doctors and nurses who show their mettle tending to the many infected patients on the wards.

3.6.2. London has been the significant hotspot for COVID-19 in this first wave of the pandemic, evidenced by hospital data. News media and epidemiological reporting in pre-industrial Britain bears no comparison and reports of how bad the situation was in some areas greatly affected by the epidemic might have been exaggerations. For instance, it was heard reported for Whitby that plague was so bad that the only people self-isolating at home were the well. Some feared that searchers and watchers strangled their patients, or buried them alive, in order to plunder their houses (Thorpe et al., 2019). Thomas Dekker, who published several pamphlets commenting on outbreaks of plague, prefaced his *The Wonderful Year* (1603) with the notice that some of his tales came to him 'by flying report: whose tongue (as it often does) if in spreading them I have tript in any material point … beare with the error: and the rather, because it is not wilfully committed'. Those mentioned in the tales should not take offence since it was not set down 'with a malitious hand' (Dekker, 1603). The government was nevertheless worried by the spread of 'fake news' – anger at government policy on quarantine, for instance, when decisions of the Privy Council in London were alleged to have shut up some people as a punishment (Newman, 2012) - and new advice from the physicians in 1630 included restricting 'idle assemblies' and banning plays and the singing of Ballads (Achinstein, 1992). At a time when moral and physical dangers were equated, the contents of ballads could be harmful and ballad-hawkers had already been restricted in 1581 and again in 1608. Part of their threat was that ballads spread without proper authority and checks, like plague. Printing orders were repeatedly issued by the Stationers' Company in an attempt to restrict ballad production on the grounds of piracy, but mainly because of their moral and morally transmissible danger. Ballads were communicated to those especially vulnerable to the plague – the poor and the outcast. The suppression of ballads points to fears held by the authorities about social and political subversion. Today we talk of stories posted on social media which go 'viral'. One UK fake news item features old pictures of Muslims gathering

at mosques with claims that they are deliberately breaking lockdown restrictions in 2020. Another concerns the origin of SARS-CoV2 and how it was created in Wuhan National Institute of Virology by Chinese scientists with the help of American counterparts, rather than its naturally mutating from bat-viruses via an as-yet unknown intermediary animal, possibly a pangolin (BBC News, 2318). Until the natural scientific explanation came to dominate, plague was commonly believed in Christian Europe to be a punishment from God and people exposed to plague in the Tudor and Stuart periods would have been much concerned with debates on the origin of pestilence in order to know how best to face it. Letting God's punishment rip through a population while being neighbourly to those who suffer is the inclination of the religious soul which ran counter to the College of physicians' medical opinion. Today, the question of where SARS-CoV-2 comes from is a political rather than a religious question.

## 4. Conclusion

4.1 There are many experiences of life under plague in Tudor and Stuart England which bear comparison with the present COVID-19 pandemic, although the risks involved for society from a disease with a 60–100% likelihood of death after infection compared with a projected 2% lethality from COVID-19 may be straining commensurability. On the other hand, medical and emergency staff and carers without adequate PPE are also placed at considerable risk to their own lives. The known unknowns of this novel virus also place us closer to our perception of the ignorance of the past about plague and its propagation in epidemics. Front line workers have nevertheless had to continue in post, while others not supported by the furlough scheme have to continue to work in spite of lockdown, as did most town-dwellers in past centuries who had up to that point avoided infection and being 'shutt up' in their quarantined houses. The rich past and present flee to the countryside where the prevalence of COVID-19 is low and where plague was a once-in-hundred-year event, little interfering with rural life. The repeated spread of infection in centres of population was blamed on 'negligence, disorder and want of charity' with further punishments handed out, as today the British police have recorded nearly 200,000 COVID-19-related incidents involving anti-social behaviour, lack of social distancing and illegal gatherings during lockdown. Many such factors appear to be commonalities of organised response to mass infection over time: limits on freedom of movement and congregation, increased danger in certain necessary occupations, restrictions on being with the dying and burying the dead, the suppression of inconvenient beliefs. Perhaps the saddest parallel in the British experience of the pandemic has been the confinement of the sick with the healthy, as COVID-19 patients were discharged from hospitals into care homes without confirmation that they were no longer infective and without adequate infection controls, an oversight which approaches in outcome the deliberate English policy of Tudor and Stuart monarchs of locking up whole families together when one member showed signs of plague.

4.2 In another way, parallels exist which should have no relevance to Britain in the 21st century. In a wider biopsychosocial sense, epidemic disease is not a leveller of society and we are not all in the same boat with coronavirus. Those rich enough to possess comfortable and spacious homes have fared better than those less well off in cramped accommodation and multi-generational households. They removed to the peace of the countryside, where mental health and wellbeing can be nourished, and are able to sustain the inevitable economic downturn in the wake of the epidemic. Social, economic and health inequities have been exacerbated in the pandemic, therefore, and realisation of the extent to which ten years of austerity under successive UK governments left us less prepared to face a pandemic and more unequal in our individual abilities to cope with the consequences of the spread of infection and lockdown needs to be carried forward into new government initiatives for levelling up society. Perhaps the most munificent modern response to a pestilence has been the furlough scheme agreed by Elizabeth II's Chancellor, a wholly unprecedented policy initiative benefitting most of society and saving many thousands of companies and many millions of jobs. This must have supported the wellbeing and mental health of countless people, but it will be a temporary measure and a reckoning must come. What will the cost be from the inevitable economic recession already registering? Further inequities? The new normal must be a fairer normal. People today should be given more credit for sophisticated understanding than was granted in past centuries, when fear and punishment coerced the majority to conform, and as rational actors, capable of taking decisions for themselves and managing personal risk, be granted access to relevant information which will influence decisions about national and community life going forward after lockdown.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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