

Driving off the cliff: health politics, supply chain disruption and Brexit

Holly Jarman, PhD, Associate Professor of Health Management and Policy, University of Michigan School of Public Health (hjarman@umich.edu) and Elizabeth Vlachakis, HMP Governance Lab Fellow, University of Michigan School of Public Health

DRAFT FOR CONFERENCE PRESENTATION: PLEASE DO NOT SHARE WITHOUT PERMISSION OF THE AUTHORS

1. Introduction

Brexit is ‘done’, but its effects linger on. Rather than being a discrete event, Brexit is a long-term process of decoupling -a deliberate severing of the UK’s economic and political ties to the European Union. Decoupling, although reminiscent of the economic nationalism practiced by states in the early part of the 20th century, has happened so rarely in recent decades that it is worth studying in detail (Johnson and Gramer 2020, US Chamber of Commerce 2021, Financial Times 2021). Many of the consequences of the Brexit decoupling are yet to be determined. Some of the functions performed by the European single market and the EU’s political institutions are being replaced with domestic policies, patterns of investment, and associated politics, the effects of which are yet unknown, but which are likely to impact population health, public health and healthcare in Britain for the foreseeable future.

In this paper, we analyze the UK government’s policy actions and political rhetoric in relation to post-Brexit supply chain disruptions affecting health in England. Using the case of influenza vaccine supply in 2021-2022, we explore the short- and long-term ways in which the UK government has responded to these supply chain challenges and assess what this may mean for our understanding of the politics of decoupling.

We find that although the causes of supply chain disruptions are complex, the political choices made during the Brexit decoupling process continue to exert an effect on policy responses to those disruptions. Politicians have constructed a narrow policy space for responding to disruptions with little room to maneuver, even in areas of high salience involving the much-loved NHS. Rather than being constrained by relations with the EU, or non-EU trading partners, the UK government is constrained by its own political rhetoric.

The following sections lay out our methods before discussing the governance of vaccine supply chains in England, presenting the case of influenza vaccine shortages during the 2021-22 season, including policy responses and political rhetoric, and discussing the consequences of the case for understanding health politics.

2. The politics of decoupling

The concept of decoupling is used in several different contexts by contemporary scholars. In this paper, we refer to decoupling as the process of deliberately breaking cross border economic and political ties between two or more countries or entities. Decoupling may or may not be accompanied by building new ties with a different state or set of states. Through this process, a state reorients the policies and institutions that govern its economy away from a particular international partner. Decoupling of this kind has happened rarely, but some examples include the reorientation of US and European foreign, energy and industrial policy away from China (and China's reorientation of its economy and industrial policy away from international partners), periods of trade isolationism practiced by some states e.g., the United States, Japan or Germany, cases where strong economic ties to a country are replaced by stringent economic sanctions, or attempts to gain energy independence from other states, most recently in relation to Russia's invasion of Ukraine.

In the modern context, decoupling often seems to be a populist act by those seeking political, rather than economic or environmental, gains. Decoupling shares several of the key characteristics frequently associated with contemporary populism, most significantly an emphasis on renewed nationalism, opposition to multilateralism and rejection of political elites (Müller 2016, Calhoun 2017, Falkenbach and Greer 2021). It is driven by similar forces, including a loss of faith that a globalized economic model will provide adequate benefits and decreased trust in 'outsiders' who may have different identities or ideologies, although experts disagree about how much each of these factors weighs into voters' decisionmaking (see, for example, Hardy and McCann 2017 and related special issue, Hopkin 2017 and related special issue, Carreras, Carreras and Bowler 2019).

By our definition, Brexit is clearly a significant 'decoupling', perhaps one of the most significant ever undertaken by a state. Key elements of the political discourse since the 2016 referendum include a strong emphasis from proponents of decoupling on the alleged failure of the European Union to provide economic and political benefits to Britain, constraints imposed by the EU on UK policy choices in areas from trade and industrial policy to immigration, and the imagined potential for Britain to do better as an 'independent' state. Conservative leaders, in particular, have contrasted an image of a failed EU with 'global Britain', envisioned as a state that is a stand-alone military power, one of the largest and most 'innovative' economies in the world, energy independent, and a significant actor in international relations in areas like trade

and climate change (Turner 2019, Heron and Siles-Brügge 2021, Cabinet Office 2021, Glencross and McCourt 2018, Vinjamuri 2022).

Frequently, these arguments have been framed in general terms rather than specified through policy measures; they are most frequently found in leaders' speeches. However, some of the greatest challenges for any government undertaking decoupling are not rhetorical, but involve policies that manage the negative effects of breaking ties. Decoupling on more than a surface level requires a state to restructure its economy in big and small ways. Governments need to reshape relationships with other countries or international institutions at one level while at the same time providing more granular guidance for businesses, investors and citizens to mitigate disruption.

All of these changes have the potential to impact welfare states and health systems, yet many studies of decoupling focus on predicting aggregate economic costs and benefits. Evaluation of how decoupling is likely to affect health policies and ministries is sorely needed, but difficult to do before decoupling takes place (Fahy et. al. 2017, 2019, 2021, Dayan et. al. 2020, 2021). Now that the Brexit decoupling is underway, it is more important than ever to understand the short- and long-term effects that the politics of decoupling is likely to have on health politics and policies going forward.

3. Methods

In this paper, we seek insights about the politics of decoupling by studying health-related supply chain disruptions. The governance of vaccine supply chains is significantly understudied, however. Scholarly literature on the topic is very scant across the fields of political science, political economy, public administration, health policy and law. Furthermore, unlike in some areas of health policy and politics, relevant gray literature from think tanks and similar sources describing or evaluating vaccine regulation in the UK is also sparse.

To explore supply chain disruptions, therefore, we adopted a case study approach that relied on publicly available documentation to construct a core narrative. We read and synthesized a diverse set of primary and secondary documents, including laws and regulations, industry and government press releases and annual reports, transcripts of parliamentary debates and corporate calls with investors, NHS guidance, and national and local media accounts of supply chain disruptions. We incorporated descriptive statistics where appropriate. The resulting narrative is limited in that it draws only on publicly available documentation, however, we triangulated between two or more sources whenever possible.

The case of influenza vaccine supply chains is useful in understanding the politics of decoupling and their effects on health. Seasonal flu vaccines, unlike new vaccines against COVID-19, have been administered across the UK for many years through a central program that remained relatively unchanged after Brexit. The UK's flu vaccine supply chain, however,

has reoriented since 2016 away from the European Single Market in favor of domestic end-to-end production. As such, influenza vaccines are a most likely case for finding positive outcomes from the Brexit decoupling. Nevertheless, the case results below highlight the ways in which these benefits can fail to be realized, shedding light on the ways that decoupling distorts ‘politics as usual’.

4. Vaccine Supply Chain Governance in England

Obtaining products necessary to supply health care happens differently across the UK’s four devolved health systems. This paper focuses on procurement, supply and distribution of influenza vaccines for use in NHS England, the UK’s largest healthcare system. The authorization and safety of these vaccines, while extremely important, is not discussed in this paper. Good analyses of this issue can be found elsewhere (Mahase 2020, Timmins and Baird 2022).

NHS England provides care to the majority of England’s 60 million people, employs 1.2 million FTE staff and has a budget measured in billions of pounds. It is one of the world’s bigger health systems in terms of volume, accounting for 564 million patient encounters per year. In 2018/19, prior to the COVID-19 pandemic, the UK government spent around £70 billion on procurement of health related goods and services in England: about £40 billion on health services, £18 billion on medicines and £6 billion on other health products (Institute for Government 2020). England is therefore a significant market for vaccine manufacturers.

NHS England is governed by the Department for Health and Social Care (DHSC). DHSC delegates responsibility for vaccinating patients to NHS England, which in turn commissions these services from providers. The UK Health Security Agency (which replaced Public Health England in 2021) has responsibility for central procurement of most vaccines included in the National Programme. Influenza vaccines for children are centrally procured through this process. Flu vaccines for adults, however, are purchased by GPs directly from suppliers (Public Health England 2020). This distinguishes England from Scotland and Northern Ireland as well as most other countries in Western Europe, which have more centralized systems (Stuurman 2021).

Despite delegating responsibility for procurement and vaccination to other bodies, DHSC retains responsibility for ‘the continuity of supply of medicines’. Ensuring continuity of supply requires input from a range of actors and DHSC ‘works closely with NHSE&I, the Medicines and Healthcare products Regulatory Agency (MHRA), the wider NHS, pharmaceutical companies, wholesalers and others in the supply chain to ensure consistency of supply of medicines’ (NHSE&I 2019). Within NHSE&I, the Commercial Medicines Unit (CMU) ‘is responsible for coordinating operational management of supply problems for medicines procured for hospitals on Commercial Medicines Unit frameworks’ (NHSE&I 2019). CMU oversees the tendering, awarding and management of frameworks for licensed medicines for regional

purchasing groups within the NHS. Various other parts of the bureaucracy are also engaged in this process, including the Medicines Shortages Response Group, which assists the DHSC Medicines Supply Team and CMU on high profile shortages, and NHSE&I's Community Pharmacy Commissioning Team, which is responsible for commissioning pharmaceutical services 'for the population of England' (NHSE&I 2019, Finch 2019).

In 2018 and 2019, anticipating potential shortages of medicines due to Brexit, the government revised the regulatory framework governing continuity of supply for medicines. The revisions enabled community pharmacies to provide patients with medicines based on a legal protocol rather than a doctor's prescription, allowing for changes in dose or substitutions during supply shortages. Under the revised framework, entities supplying medicinal products in the UK (known as Marketing Authorization Holders, or MAHs) are legally required to inform DHSC of any existing or anticipated supply problems, at least six months in advance, where possible¹ (DHSC 2021a). On vaccines specifically, guidance from NHSE&I on the Brexit transition was issued on December 30th 2020. The guidance instructed providers not to stockpile vaccines and to coordinate locally across trusts and CCGs to ensure local continuity of supply. A Vaccines Shortage Response Group was to be created at the UK level to respond to disruptions, coordinated by NHSE&I, with input from the devolved administrations (NHSE&I 2020).

In addition to being a Brexit preparedness measure, the new policy framework was a reaction to prior disruptions. In particular, the shortage of influenza vaccines during the COVID-19 pandemic was not a new occurrence. In 2018, for example, anxiety among health practitioners about the supply of influenza vaccines was exacerbated by uncertainties relating to phased distribution of the vaccine, and by late changes in guidance that were only communicated to prescribers one month before the deadline to order influenza vaccines from wholesalers (Torjesen 2018, Sagonowski 2018).

Far from ensuring a consistent response to influenza outbreaks, the case of influenza vaccine supply chain disruption demonstrates that the decentralized regulatory system is nevertheless highly sensitive to both the timing and content of government action and any delays on the part of manufacturers, which are in turn determined by forces outside of the realm of health policy. When this system was subsequently confronted with overlapping crises -the COVID-19 pandemic and Brexit- central government actors would be forced to intervene to secure supply and manage public and stakeholder panic. Although the consequences of supply disruptions were ultimately modest, this case nevertheless demonstrates the need for more consistent regulation in the future.

¹ See The Health Services Products (Provision and Disclosure of Information) Regulations 2018 and the National Health Service Act 2006 as amended by Section 8 of the 2017 Act.

3. Disruptions in Influenza Vaccine Supply and Distribution, 2021-2022

In early September 2021, English news outlets reported that GPs were canceling flu vaccination appointments due to delays in receiving shipments of vaccines. Supplier Seqirus, the largest supplier of flu vaccines to the UK (Seqirus 2021), announced a two week delay in delivering supplies due to “unforeseen road freight challenges” in a letter to GPs and pharmacies, advising them to cancel appointments until further notice (Guardian 2021). Stakeholders in the health sector reacted with alarm, pointing out that even delays of a few weeks in receiving vaccines could result in considerable negative health effects for at-risk patients. Canceling and then rebooking appointments created a significant additional burden for staff already burned-out from the pandemic, some of whom received threats from patients in response (Royal College of GPs, BMA). Ultimately, the shortage lasted longer than initially expected with delays resolved in November.

Coming immediately on top of shortages of personal protective equipment needed to protect frontline staff against COVID-19 and shortages of test tubes used to draw blood for testing, the influenza vaccine shortage quickly made headlines. At the time, media outlets and opposition politicians attributed influenza supply chain disruptions to a combination of Brexit-related border disruption and Brexit-related labor shortages in the distribution sector. But to what extent were these accounts accurate? This section describes each of the factors that contributed to the influenza vaccine shortage before attempting to draw lessons about the politics of decoupling.

Increased demand and uncertain supply

In 2021, the influenza vaccine shortage occurred during the middle of the largest ever push from NHS England to get people vaccinated against the flu, with a target of reaching 35 million recipients. Simultaneously, new vaccination efforts were taking place that aimed to give one dose of COVID vaccine to 12-15 year olds and to give COVID booster shots to vulnerable groups. The push to vaccinate more people came, in part, from the Joint Committee on Vaccination and Immunization (JCVI), the government’s main advisory body on vaccine eligibility, as well as health professionals in the UK more generally. JCVI were concerned about the possible health effects of simultaneous exposure to COVID-19 and influenza and advised co-vaccination wherever possible. Health professionals noted that because lockdown measures in 2020 had significantly reduced influenza transmission and therefore population immunity, reduced physical distancing requirements in 2021 could result in a bumper year for flu. Politicians, meanwhile, were also concerned about the impacts of a potential dual pandemic on NHS capacity, raising concerns that hospitals would be overwhelmed with patients.

During the pandemic, therefore, uptake of flu vaccines increased significantly beyond pre-pandemic levels, in part driven by governments' concerns that health systems would be overwhelmed in the event of a dual influenza and coronavirus pandemic, which led them to purchase more vaccines in advance (Seqirus 2020), and in part driven by patient demand as a response to public health communications (Slawther 2020, Boots 2021). Uptake in England rose between 2019-2020 and 2020-2021 for all eligible groups except pregnant women, with record increases in uptake for patients aged 65 and over, children aged 2 and 3 years, and patients in at-risk groups (Public Health England 2021). Patients aged between 50 and 65 without additional health risks were included in the eligible groups for the first time in 2020-2021, with 35.2% uptake. This uptake increased to 45.7% in 2021-2022 as did uptake among over 65s, while uptake for at-risk patients of all ages remained stable, and uptake for 2 and 3 year olds and pregnant women declined (UKHSA 2022). Overall, therefore, the push to increase uptake was successful. Nevertheless, the government decided in 2022-23 to revert eligibility to pre-pandemic levels.

Uncertain supply

As noted above, disruptions in the supply of influenza vaccines were not new, with product shortages occurring in both 2018-2019 and 2019-2020. In 2020-2021, additional, pandemic-related demand fuelled calls from providers for reassurance about continuity of supply. In fall 2020, some community pharmacies reported that they had used up their available stocks of influenza vaccines early. The large retail pharmacy chain Boots suspended vaccine appointments for those under 65 due to lack of supply, even after ordering 20 percent additional stock (Robinson 2020). Peak associations representing GPs and pharmacists contacted health secretary Matt Hancock to highlight flu vaccine shortages being experienced by GPs and ask for reassurance (e.g., Royal College of General Practitioners 2020).

The government's main policy action to address potential supply issues was to source additional flu vaccines from outside the UK. But guidance about how to access these vaccines was only published on October 9th, too late in the view of many pharmacists and GPs to provide adequate reassurance as to continuity of supply. The guidance characterized these central stocks as an emergency backup to be delivered once all local stocks had been exhausted (DHSC 2020). Speaking to Parliament, Health Secretary Matt Hancock stated that 'we have enough to vaccinate every single person who is in a priority group over the age of 65, those who are clinically vulnerable and the children who are eligible' and that pointed out that the government's emergency supply of vaccines would be rolled out over the coming months.²

Table 1: Influenza Vaccines Available for Use in the UK, 2021-2022 Flu Season

² HC Deb, 5 October 2020, c648.

Supplier	Name	Vaccine Type	Age indications
AstraZeneca UK Ltd	Fluenz© Tetra	Quadrivalent LAIV (live attenuated influenza vaccine) supplied as nasal spray suspension	From 24 months to less than 18 years of age
MASTA	Quadrivalent Influenza Vaccine	QIVe (standard egg-grown quadrivalent influenza vaccine), split virion, inactivated	From 6 months
Sanofi Pasteur Vaccines	Quadrivalent Influenza Vaccine	QIVe (standard egg-grown quadrivalent Influenza vaccine), split virion, inactivated	From 6 months
Sanofi Pasteur Vaccines	Supemtek	QIVr (quadrivalent Influenza vaccine (recombinant, prepared in cell culture))	From 18 years
Seqirus UK Ltd	Flucelvax® Tetra	QIVc (cell-grown quadrivalent Influenza vaccine), surface antigen, inactivated	From 2 years (existing product)
Seqirus UK Ltd	Fluad Tetra	aQIV (egg-grown quadrivalent Influenza vaccine), surface antigen, inactivated, adjuvanted with MF59C.1	From 65 years (new product launched in 2020)
Viatrix (formerly Mylan)	Quadrivalent Influvac® sub-unit Tetra	QIVe (standard egg-grown quadrivalent Influenza vaccine), surface antigen, inactivated	From 6 months

Source: Public Health England, 2021b.

The shortages experienced in 2020 occurred again in fall 2021, but this time Brexit-related factors contributed to greater concern. In September through October, major newspapers, rather than just the press covering the health sector, reported that pharmacies were running out of influenza vaccines and linked these shortages to Brexit (See, for example, Campbell 2021, Lovett 2021, Phillips 2021). Key stakeholders, particularly peak associations representing pharmacies and GPs, complained publicly and privately. Throughout September and the start of October, associations petitioned government representatives to make their contingency plans clear. In meetings with officials, pharmacy associations requested that the government use an

emergency protocol, the ‘serious shortage protocol’, originally placed in law for use in the event of drug shortages due to a hard Brexit, but to no avail (Quinn 2021). The government’s incentives remained to portray the disruptions as minimal, and declaring a product shortage would have likely led to more headlines. In adopting this strategy, DHSC likely wished to avoid a repeat of the panic surrounding shortages of PPE experienced in the first half of 2020 that exacerbated stock shortages and led to damning headlines.

Again, despite initially encouraging the devolved units within the NHS to coordinate on local contingency planning, the government centrally procured additional stocks of vaccines from outside the UK (DHSC 2021b). Guidance in accessing suppliers was released on October 8th. Although junior ministers in both chambers addressed parliamentary questions about the flu vaccine shortages, Health Secretary Sajid Javid did not discuss the issue in the House.

The role of industrial policy in decoupling

Part of the problem behind these shortages was that the UK did not have domestic manufacturing capacity that covered the whole supply chain. The UK has one long standing manufacturing facility making flu vaccines, located in Speke, a suburb of Liverpool. The facility is run by a global firm called Seqirus, the world’s second largest influenza vaccine manufacturer that was created in 2015 through a merger between bioCSL and units of Novartis and owned by biotech company CSL (Eagle 2016). The retention and expansion of the Seqirus facility within the UK is potentially a great success story, although the success of the government’s industrial policy decisions in this case was later offset by the border disruptions caused by Brexit.

Until mid-to-late 2021, the Liverpool facility did not have ‘fill and finish’ capacity, meaning that vaccines had to be shipped abroad to be put into syringes and then re-imported for use within the NHS (Seqirus 2021). After acquiring the components that would come to make up Seqirus in 2015, parent-company CSL developed plans to turn the loss making ‘carve out of a carve out’ into a stand alone profitable business. These plans included an increase in Seqirus’s in-house fill and finish capacity (Seqirus 2016, 2020).

In December 2016, the CSL Board was due to make a decision about where to locate that fill and finish capacity, choosing between the Liverpool site and locations in continental Europe. As of December 1st, however, Member of Parliament Maria Eagle, whose constituency contained the manufacturing plant, had been unable to secure a meeting with the Secretary of State for Business, Energy and Industrial Strategy to discuss the expansion plans. After Eagle raised the question in Parliament, however, a meeting was scheduled.³ Local government, acting through regional development partnership Invest Liverpool -which was funded by the EU’s European Regional Development Fund- committed £1 million in funding as an incentive to development (Invest Liverpool 2021). Ultimately, the UK government supported the expansion, although any incentives offered to the company by central government are not public knowledge.

³ HC, Business of the House, 1 December 2016, vol. 617, c.1677.

Seqirus announced its decision to add fill and finish capability at the Liverpool site in 2017, with the President of Seqirus describing the expansion as ‘an export success story’ that would allow the firm to export more readily to Europe, North America, Australasia and Latin America. Secretary of State for Business, Energy and Industrial Strategy Greg Clark praised the move, which he said was ‘achieved by the board, Government and local leaders working together’ (Seqirus 2017a, 2017b). However, while local media initially reported that the fill and finish expansion was expected to be ‘fully operational in 2019’ (Thompson 2017), the first filled syringes did not roll off the production line until June 2021 (Seqirus 2021). In the meantime, finished vaccines would still have to be re-imported from continental Europe. At this point, Seqirus faced additional challenges with importing its final product.

Despite the supposed success of industrial policy in this case, other policy actions from central government cast doubt on its support for domestic manufacturing capacity going forward. During the pandemic, the UK government created a Vaccine Manufacturing and Innovation Centre (VMIC), a joint venture between Universities and industry partners backed by £200 million of taxpayers’ money. VMIC was designed as a hub that could produce the large volumes of vaccines needed during a pandemic. However, immediately after VMIC was completed in early 2022, the government put the facility up for sale rather than retaining the capacity within the public sector (Glover 2022).

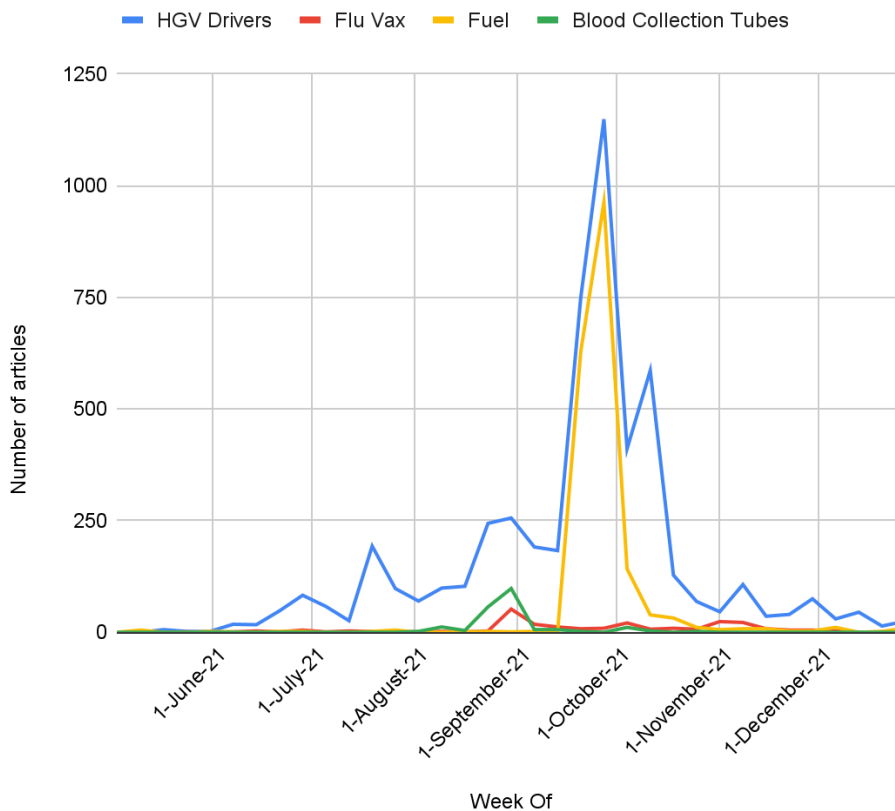
Distribution difficulties

In 2021, in contrast with the previous year, the government was dealing not only with ongoing pandemic-related demands for influenza vaccines, but also with Brexit-related and pandemic-related supply chain disruptions. Some of these effects remained largely invisible. However, three categories of highly visible disruption occurred throughout the spring and summer: i) bottlenecks at border crossings; ii) product shortages; and iii) supply chain delays attributable to shortages of key workers, including truck drivers, warehouse workers and others logistics and distribution staff. At several points throughout the year, lorries lined up along the motorways leading to the port of Dover as drivers and border officials struggled with new requirements and heavy paperwork. Businesses complained that their goods were spoiling while waiting to get through customs. Food retailers, restaurant chains and customers reported supply disruptions and product shortages, resulting in empty supermarket shelves, products withdrawn from menus, and in one notable case -Nando’s- a temporary shutdown.

Employers in many sectors struggled to recruit and retain staff, and HGV drivers were in particular demand. The HGV driver shortage was a matter of high profile debate for several months prior to the flu vaccine disruptions that were first brought to the attention of GPs and the public in early September (see Figure 1). This overlap, combined with Seqirus’s statement that the delay was due to ‘unforeseen challenges linked with road freight delays’ caused media outlets, medical peak associations and many members of the public to attribute flu vaccine shortages to HGV driver shortages and border challenges, which they viewed as effects of Brexit

(see, for example, BBC 2021a, 2021b, Sky News 2021, Phillips 2021, Telegraph 2021, Campbell 2021, Guardian 2021b, Lovett 2021, Rogers and Downes 2021, Gutteridge 2021).

Figure 1: Key shortages discussed in UK media, 2021



Soon after the initial letter from Seqirus informing GPs of delivery delays, the issue was raised in Parliament. Rather than elaborating on what the ‘road freight delays’ might be, the Government put forward a distinctly different narrative that sought to characterize the disruptions as minimal. In the House of Commons, Vaccines Minister Nadhim Sahawi cautioned other members to avoid characterizing the disruptions as a ‘shortage’, claiming that Seqirus was experiencing a ‘border issue with its Spanish fill-and-finish factory, which it has used for many, many years.’ He stated that Seqirus was ‘meeting the Spanish regulator to see what the issue is’ and that the company’s supply routes via Germany and Belgium were operating normally.⁴ In the House of Lords, Parliamentary Under-Secretary of State Lord Bethell seemed blindsided, first stating that he had no knowledge of appointments being canceled due to vaccine delays and then,

⁴ HC Deb, 6 September 2021, c70. As of the time of writing, the authors have been unable to confirm this account against any other publicly available information.

when this statement was questioned by his peers, that the delays ‘had not had a meaningful impact on the supply of flu vaccines to this country’ and that ‘I am not sure that there is a Brexit angle and we have it covered.’ Opposition peers requested a meeting of COBRA to discuss the shortages of blood collection tubes and influenza vaccines, and suggested that the army be drafted in to assist with transportation, but Lord Bethell replied that ‘this is not a driver problem; it is a delivery problem’.⁵

In any other year, the distribution issues related to flu vaccines would likely have dominated the news cycle for several weeks and caused considerable problems for politicians. The entire disruption from start to finish lasted three months. The highest profile disruptions beginning at the start of September waned by the end of the month, when the company confirmed that 85 percent of its vaccines destined for England and Wales would be delivered to GP clinics and community pharmacies by end October, with the rest delivered in November (Lovett 2021).

The voices of concerned GPs, pharmacists and patients were drowned out by the HGV crisis in the latter part of that period, however, when the shortage of drivers caused fuel to be maldistributed across the country. While the UK’s overall supply of fuel was adequate, there were simply not enough trained HGV drivers in the workforce to distribute the fuel to petrol stations. When some petrol stations ran out of fuel, media reports of shortages caused widespread panic buying, even in areas where fuel supplies had been adequate. As images circulated of huge queues at petrol stations, panic buying intensified. Reports of essential workers, including healthcare workers, as well as ambulances being unable to obtain fuel only served to heighten public attention. Pharmacists distributing COVID and flu vaccines to people in their homes complained that they could not purchase petrol (Quinn 2021). Police officers were assigned to oversee some petrol station forecourts (Gutteridge 2021). Eventually, the government called in drivers from the Army to assist in the distribution of fuel (Davey and Macaskill 2021).

The role of workforce policies in decoupling

Throughout 2021, government politicians argued that the HGV driver shortage was a global problem and therefore not attributable to Brexit, instead blaming the pandemic. This explanation was partial at best. HGV road tests had been disrupted due to the coronavirus pandemic, and lockdown resulted in more demand for deliveries. But there were long term problems with the recruitment and retention of HGV drivers both in the UK and continental Europe that preceded both Brexit and the pandemic -the HGV workforce was rapidly aging, and younger people, especially women, showed little interest in joining the sector. In part, this was due to working conditions and pay, which involved low wages despite the level of necessary skill, long hours and poor and sometimes unsafe working conditions. These factors meant that the UK already had a significant driver shortage prior to the Brexit vote. Brexit exacerbated these trends, by adding incentives for drivers, particularly European nationals, to either leave the sector entirely or

⁵ HL Flu Vaccination and Blood Test Cancellations. 15.07pm.

switch to routes wholly within the EU in order to avoid predicted border disruptions and additional paperwork (. A policy change in Spring 2021 affecting contractors (originally proposed by the Conservative / Lib Dem coalition as a clamp down on tax avoidance) had the effect of increasing taxation for HGV drivers while wages remained flat (Recruitment and Employment Confederation 2022).

Initially, the government was reluctant to publicly address the shortage of HGV drivers. Rather than addressing the issue through some form of workforce policy or industrial strategy, the government relaxed requirements for working time limits and rest breaks (which were themselves retained EU law originating from the working time directive) through several statutory instruments, first from July through October 2021, then from November through January 2022. Relaxation took place via Parliament's negative procedure, where a statutory instrument becomes law automatically but can be annulled through a parliamentary vote. The measures were controversial enough that several attempts to annul the regulations were made in the House of Lords, led by a Conservative peer, on the grounds that the serial, temporary relaxation of restrictions did not solve the original problem (Brader and Pocock 2021).

Once the issue became highly salient, however, with queues at petrol station forecourts and shortages threatening the Christmas shopping season and government popularity, a range of other policy measures were hastily put forward, including ideas that were ridiculed in the press. Dominic Raab suggested that people doing community service should be made to drive trucks, and the government sent out recruitment letters to Germans in the UK with driving licenses (German licenses include the ability to drive large lorries) that reached a number of people who were uninterested or who had never driven anything larger than a small van (Sky News 2021b).

A more reasonable action the government took was to issue 5000 temporary visas for foreign nationals wishing to drive in the UK. However, the government stipulated that the temporary visas would expire on Christmas Eve, a move that was heavily criticized by the industry for making a viable policy relatively unattractive to drivers. Ultimately, only 300 applications were received, and each took up to three weeks to process, rendering the policy largely ineffective (Reuters 2021).

Throughout this period government leaders responded to disruptions with rhetoric about Brexit that sought to shift blame onto the industry and, ultimately, onto the EU (Holder 2021). In an argument rife with inaccuracies, Boris Johnson characterized UK supply chains as 'very resilient'. He instead defined the problem as an EU-led and industry-facilitated 'failed model' of 'low-wage, low-skilled labour' caused by a system of 'unskilled, mass immigration' that the UK public had voted against in the Brexit referendum (BBC News 2021). This contrasted strongly with the views of European politicians who instead saw the EU, particularly its freedom of movement laws, as a potential solution. As German politician Olaf Scholz commented, "The free movement of labor is part of the European Union, and we worked very hard to convince the British not to leave the union. They decided different, and I hope they will manage the problems coming from that" (Boffey, Mason and Stuart 2021). Or as Edwin Ateama of the Dutch union

FNV put it live on Radio 4, ‘The EU workers we speak to will not go to the UK for a short term visa to help the UK out of the shit they created themselves’ (Gowans 2021).

5. Discussion: rhetoric vs. policy

Decoupling the UK economy from the European single market and UK politics and law from the EU *acquis* and institutions is a process without much precedent. In this paper, we have attempted to unpick some of the tangled causality surrounding the influenza vaccine shortages experienced by NHS England in 2021-2022. Causes range from the difficulties associated with capital investment, to Brexit border disruptions, to increased demand due to the pandemic.

Drawing from this case, we can see that the politics of decoupling happen across two spheres of activity: the rhetorical sphere, where public, media-led discourse takes place, and the policy sphere, where politicians and bureaucratic agencies make and implement policies (see Table 2). During the decoupling process -in this case Brexit- the decoupling debate dominates arguments in the rhetorical sphere, while placing stress on the economy and society that exacerbates any existing deficiencies in the policy sphere.

In terms of rhetoric, decoupling leads politicians to adopt a number of dominant rhetorical strategies including distraction, denial, credit-claiming and blame shifting. The UK government’s leading politicians have for several years been increasingly incentivized to minimize policy actions and adopt political rhetoric benefitting their ongoing electoral position. By dominating and polarizing national discourse, decoupling facilitates this populist strategy. The costs of decoupling can be painted as temporary pain and necessary to achieve the purported benefits of sovereignty. Failures to address problems through policy actions can be blamed on the ‘other’, whether the European Union, the global economy, political opponents or certain demographic groups within society. In the poor information environment that currently exists, cause and effect become hard to determine. Decoupling creates among the public a sense of equifinality -the idea that there are multiple causal paths leading to the overdetermined outcome of decoupling.

Table 2: What the case study tells us about decoupling

Factor	Policy Lessons	Effects of Brexit Rhetoric
Increased demand	<ul style="list-style-type: none"> Government-set vaccine eligibility criteria strongly influence demand, of great importance to manufacturers seeking to sell vaccines. Timing of policy change is key. 	<ul style="list-style-type: none"> Brexit debate distracts from government mistakes in communicating policy changes to key stakeholders.
Uncertain supply	<ul style="list-style-type: none"> Role of central government is key in maintaining continuity of supply, setting expectations within the NHS and pharmacies 	<ul style="list-style-type: none"> Key claim is that the UK can now freely set its own, better procurement policies (despite no actual policy change on this point).

	<ul style="list-style-type: none"> ● Comparison of annual shortages over time suggests that some shortages due to content / timing of domestic policy problems and / or constraints on manufacturing rather than decoupling 	<ul style="list-style-type: none"> ● Government incentivized to downplay or deny any disruptions to supply. ● Easy to blame shift, e.g., GPs and pharmacies have purchasing responsibility; deliveries are phased by manufacturers.
Industrial policy and manufacturing capacity	<ul style="list-style-type: none"> ● Role of European funds in supporting development ● In the absence of European funds, degree of central government commitment to large scale investment is key. ● High degree of decentralization in industrial policy and urban development could prevent optimal investment. ● Potentially increased risk of capital flight post-Brexit, as government's credible commitment to investment is weakened. 	<ul style="list-style-type: none"> ● Key claim is that decoupling will release UK's full potential. ● Government incentivized to credit-claim to support argument that Brexit is not economically damaging. ● Any failure to support national industry and innovation would be highly damaging to government's reputation.
Distribution	<ul style="list-style-type: none"> ● Role of central government in setting border rules and investing in infrastructure is vital ● Strong political incentives to delay actions on border issues due to timing of elections ● Failure to provide policy certainty to businesses likely to be politically damaging 	<ul style="list-style-type: none"> ● Key claims include that disruptions are unrelated to Brexit, disruptions are temporary, disruptions are necessary in order to be a sovereign country. ● Politicians have strong incentives to deny disruptions and minimize policy statements.
Workforce	<ul style="list-style-type: none"> ● Governments can act largely unilaterally using regulatory policy tools including licensing, workforce regulations, immigration measures (e.g., visas), but these are mostly temporary solutions. ● More significant regulation of industry or workforce enhancement requires legislation and investment. ● Politicians have strong incentives to adopt temporary fixes rather than long-term solutions. 	<ul style="list-style-type: none"> ● Electoral rewards for investing in the workforce are scant. ● Politicians have strong incentives to focus on downplaying visible disruptions rather than addressing underlying causes.

In terms of policy, however, which one might argue has the greatest potential to impact actual outcomes from Brexit, decoupling incentivizes minimal policy action. Temporary fixes to disruptions are preferred over longer-term solutions, while some policy actions are subject to serial delays over concerns that implementing them will generate negative press attention and fuel arguments that Brexit isn't working. Politicians are disincentivized to take policy actions to mitigate the disruptions that come with decoupling, because they have won elections on the promise of decoupling rather than the messy reality. Because they can win on rhetoric alone,

governments in recent years have had a strong reluctance to address issues related to political economy that require a comprehensive and longer term approach- such as workforce education, training and retention, adopting industrial policies necessary to diversify the economy, and incentivizing regional development and redistribution. The short-lived and ineffective attempts of the May government to resuscitate UK industrial policy show that even now, some decades away from the perceived policy failures of the 1970s, there's still a considerable reluctance among the political class to adopt large-scale restructuring.

The pandemic somewhat mitigates the politics of decoupling in this case. Without the pandemic, the government would likely have had far less flexibility to address shortages in influenza vaccines through actions such as emergency procurement at the national level. Without Brexit and the pandemic monopolizing national attention the rhetorical sphere, many of the supply chain disruptions experienced in the UK outlined in this paper would have been much more significant national scandals -in the past, policies that engage with the NHS have been highly politically salient and policy failure has led many health ministers to their doom. It remains to be seen to what extent, and how long, these patterns will persist in a post-pandemic UK.

6. Conclusion

The decoupling of the UK from the European Union is a long-term process, one that is likely to continue for many years to come. It is therefore important to understand the likely impact that decoupling will have on health policy and politics in the UK. As the above analysis demonstrates, rhetoric associated with Brexit, and associated polarization among the public, grants political flexibility to politicians seeking to credit claim or blame shift. Simultaneously, the politics of Brexit disincentivize the creation of new policies and strategies that could mitigate the negative effects of decoupling on the UK's health systems. The result is reactionary politics combined with policy stagnation.

7. References

- Boots. (2021). Boots UK Sees Strong Early Demand For Flu Jabs As It Increases Capacity For Winter. Boots-UK. <https://www.boots-uk.com/newsroom/news/boots-uk-sees-strong-early-demand-for-flu-jabs-as-it-increases-capacity-for-winter/>
- Brader, C., & Pocock, G. (2021). Motion to Annul Temporary Relaxation of HGV Driving Time Limits and Rest Patterns. House of Lords Library. <https://lordslibrary.parliament.uk/motion-to-annul-temporary-relaxation-of-hgv-driving-time-limits-and-rest-patterns/>
- Burns, C. (2022). People Aged 50 to 64 Years Will Not Be Eligible For NHS Flu Vaccines In 2022/2023. *The Pharmaceutical Journal*, PJ., 308(7959). DOI:10.1211/PJ.2022.1.132804 <https://pharmaceutical-journal.com/article/news/people-aged-50-to-64-years-will-not-be-eligible-for-nhs-flu-vaccines-in-2022-2023>
- Campbell, D. (2021). GP Surgeries In England Cancel Flu Jabs Amid Vaccine Shortage. *The Guardian*. <https://www.theguardian.com/society/2021/sep/03/gp-surgeries-in-england-cancel-flu-jabs-amid-shortage-of-vaccine>.
- Cabinet Office. (2021). *Global Britain In a Competitive Age: The Integrated Review Of Security, Defence, Development and Foreign Policy*. Cabinet Office. <https://www.gov.uk/government/publications/global-britain-in-a-competitive-age-the-integrated-review-of-security-defence-development-and-foreign-policy>
- Calhoun, C. (2017). Populism, nationalism and Brexit. *Brexit: Sociological Responses*, 57-76. https://calhoun.faculty.asu.edu/sites/default/files/publications/articles/populism_brexit.pdf
- Carreras, M., Irepoglu Carreras, Y., & Bowler, S. (2019). Long-Term Economic Distress, Cultural Backlash, and Support for Brexit. *Comparative Political Studies*, 52(9), 1396–1424. DOI: <https://doi.org/10.1177/0010414019830714> <https://journals.sagepub.com/doi/abs/10.1177/0010414019830714>
- Davey, J., Macaskill, A. (2021). With gas pumps still dry, Britain brings in the army. *Reuters*. <https://www.reuters.com/world/uk/britain-says-fuel-crisis-is-stabilising-2021-10-01/>
- Dayan, M., Fahy, N., Hervey, T., McCarey, M., Jarman, H., & Greer, S. (2020). *Understanding The Impact Of Brexit On Health In The UK*. London: Nuffield Trust. https://www.nuffieldtrust.org.uk/files/2020-12/1608656718_impact-of-brexit-on-health-web-nuffield-trust.pdf

Dayan, M., McCarey, M., Hervey, T., Fahy, N., Greer, S. L., Jarman, H., ... & Bristow, D. (2021).

Going it Alone: Health and Brexit In The UK. London: Nuffield Trust.

https://www.nuffieldtrust.org.uk/files/2021-12/1639914471_nuffield-trust-health-and-brex-it-in-the-uk-web.pdf

DHSC. (2020). DHSC guidance for general practice in England on accessing DHSC centrally supplied flu vaccines.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/947442/DHSC_Guidance_for_general_practice_in_England_on_accessing_DHSC_central_ly_su_pplied_flu_vaccines_-_Update_18_Dec_v2.pdf.

DHSC. (2021a). DHSC Reporting Requirements For Medicine Shortages and Discontinuations. Department of Health & Social Care.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/979531/DHSC_Reporting_Requirements_for_Medicines_Shortages_and_Discontinuations.pdf.

DHSC. (2021b). Accessing government-secured flu vaccines: guidance for primary care 2021 to 2022.

<https://www.gov.uk/government/publications/accessing-government-secured-flu-vaccines-guidance-for-primary-care-in-England-for-2021-to-2022>.

Eagle, M. (2016). Investment For Seqirus.

https://www.mariaeagle.co.uk/latest_news/2016/12/02/investment_for_seqirus/

Fahy, N., Hervey, T., Greer, S., Jarman, H., Stuckler, D., Galsworthy, M., & McKee, M. (2017). How will Brexit affect health and health services in the UK? Evaluating three possible scenarios. *The Lancet*, 390(10107), 2110-2118.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)31926-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)31926-8/fulltext)

Fahy, N., Hervey, T., Greer, S., Jarman, H., Stuckler, D., Galsworthy, M., & McKee, M.

(2019). How will Brexit affect health services in the UK? An updated evaluation. *The Lancet*, 393(10174), 949-958. [https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(19\)30425-8.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(19)30425-8.pdf)

Fahy, N., Hervey, T., Dayan, M., Flear, M., Galsworthy, M., Greer, S., ... & McKee, M.

(2021). Assessing the potential impact on health of the UK's future relationship agreement with the EU: analysis of the negotiating positions. *Health Economics, Policy and Law*, 16(3), 290-

307. DOI: <https://dx.doi.org/10.1017%2FS1744133120000171>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7294072/>

Falkenbach, M. & Greer, S. (2021). *The Populist Radical Right and Health*. Springer.
<https://link.springer.com/book/10.1007/978-3-030-70709-5?noAccess=true>

Financial Times. (2021). *Brexit Has Brought a Slow Decoupling*. The Financial Times Limited.
<https://www.ft.com/content/410100d0-9d8c-4563-a922-5ef11422abca>

Finch, I. (2019). *Government Sets Up Response Group To Tackle Medicines Shortages*. C+D: Community Pharmacy News, Analysis & CPD.
<https://www.chemistanddruggist.co.uk/CD005852/Government-sets-up-response-group-to-tackle-medicines-shortages>

Glencross, A. & McCourt, D. (2018). *Living Up to a New Role in the World: The Challenges of “Global Britain”*. *Orbis*, 62(4), 582-597. DOI:
<https://doi.org/10.1016/j.orbis.2018.08.010>.
<https://www.sciencedirect.com/science/article/pii/S003043871830070X>

Glover, R.E., Roberts, A.P., Singer, A.C. Kirchhelle, C. (2022). *Sale of UK’s Vaccine Manufacturing and Innovation Centre*. *BMJ*; 376 DOI: <https://doi.org/10.1136/bmj-2022-069999>
<https://www.bmj.com/content/376/bmj-2022-069999>

Gutteridge, N. (2021). *Britain Facing Fuel and Supply Shortage For Months As Drivers Queue At Petrol Stations On 8th Day Of Chaos*. *The Sun*.
<https://www.thesun.co.uk/news/16299447/brits-queue-petrol-crisis-weeks/>.

Invest Liverpool. (2021). *Liverpool City Region’s Seqiris Strengthens UK Influenza Vaccine Response Following £50 Million Investment*. Invest Liverpool.
<https://www.investliverpool.com/news/liverpool-city-regions-seqiris-strengthens-uk-influenza-vaccine-response-following-50-million-investment/>.

Johnson, K., & Gramer, R. (2020). *The Great Decoupling*. Foreign Policy, FP Group.
<https://foreignpolicy.com/2020/05/14/china-us-pandemic-economy-tensions-trump-coronavirus-covid-new-cold-war-economics-the-great-decoupling/>.

Lovett, S. (2021). *GP Flu Jabs In England Hit By Vaccine Shortages Despite Government Claims Of ‘No Impact’*. *The Independent*. <https://www.independent.co.uk/news/health/flu-vaccine-nhs-england-shortages-b1930026.html>.

NHS England & NHS Improvement. (2019). A Guide To Managing Medicines Supply and Shortages. Department of Health & Social Care. <https://www.england.nhs.uk/wp-content/uploads/2019/11/a-guide-to-managing-medicines-supply-and-shortages-2.pdf>

NHS England & NHS Improvement. (2020). EU Exit: Key Messages For NHS Organisations. NHS. https://www.england.nhs.uk/wp-content/uploads/2020/12/BE0326_-EU-Exit-key-messages_30dec.pdf

Phillips, A. (2021). Flu Jab Appointments Set To Be Disrupted As Vaccine Deliveries Delayed By Transport Problems. Sky News. <https://news.sky.com/story/flu-jab-appointments-set-to-be-disrupted-as-vaccine-deliveries-delayed-by-transport-problems-12398644>

Public Health England. (2021a). Seasonal Influenza Vaccine Uptake In GP Patients: Winter Season 2020 to 2021. Public Health England. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996033/Annual-Report_SeasonalFlu-Vaccine_GPs_2020_to_2021.pdf

Public Health England. (2021b). Influenza Vaccines: 2021 to 2022 Flu Season, 23rd June. Public Health England. <https://www.gov.uk/government/publications/influenza-vaccine-ovalbumin-content/influenza-vaccines-2020-to-2021-flu-season>.

Robinson, J. (2020). Major Wholesaler Says All Its Vaccination Stock Is Taken For Flu Season. The Pharmaceutical Journal, PJ. <https://pharmaceutical-journal.com/article/news/major-wholesaler-says-all-its-vaccination-stock-is-taken-for-flu-season>

Rogers, J. & Downes, E. (2021). When Will The Petrol Crisis End? The Sun. <https://www.thesun.co.uk/money/16242338/petrol-shortage-uk-how-long-last/>.

Royal College of General Practitioners. (2020). College Writes To Health Secretary With Concerns Over Supply and Demand Of Flu Vaccines. Royal College of General Practitioners, RCGP. <https://www.rcgp.org.uk/about-us/news/2020/october/college-writes-to-health-secretary-with-concerns-over-supply-and-demand-of-flu-vaccines.aspx>

Sagonowsky, E. (2018). Officials Deny Shortage Of Seqirus' Flud In The U.K. As Season Nears. Fierce Pharma. <https://www.fiercepharma.com/vaccines/officials-deny-shortage-seqirus-flud-u-k-as-season-nears>.

Seqirus. (2016). CSL's (CMXHF) CEO Paul Perreault on Q2 2016 Results - Earnings Call Transcript. SA Transcripts. Available at: <https://seekingalpha.com/symbol/CMXHF/earnings/transcripts>.

Seqirus. (2017a). Major UK Investment To Boost Influenza Vaccine Production, Jobs and Exports. Seqirus, A CSL Company. <https://www.seqirus.com/news/major-uk-investment-to-boost-influenza-vaccine-production>.

Seqirus. (2017b). Joint Media Release From Invest Liverpool, The Mayor Of Liverpool and Seqirus. Seqirus, A CSL Company. <https://www.seqirus.com/news/joint-media-release-from-invest-liverpool>.

Seqirus. (2020). CSL's (CMXHF) CEO Paul Perreault on Q4 2020 Results - Earnings Call Transcript. SA Transcripts. Available at: <https://seekingalpha.com/symbol/CMXHF/earnings/transcripts>.

Seqirus. (2021). Seqirus Strengthens U.K. Influenza Vaccine Response As High-Speed Fill and Finish Facility Begins Rolling 30 Million Doses In Liverpool. Seqirus, A CSL Company. <https://www.seqirus.com/news/high-speed-fill-and-finish-in-liverpool>

Sky News. (2021a). Labour Tells Govt To ‘Get a Grip’ On Supply Chain Crisis- and Says ‘Incompetence’ Is Behind Flu Jab Shortage. Sky News. <https://news.sky.com/story/labour-tells-govt-to-get-a-grip-on-supply-chain-crisis-and-says-incompetence-is-behind-flu-jab-shortage-12398799>

Sky News. (2021b). German Man Who Has Never Driven HGV ‘Very Surprised’ To Receive Letter Inviting Him To Help UK Government With Haulage. Sky News. <https://news.sky.com/story/german-man-who-has-never-driven-hgv-very-surprised-to-receive-letter-inviting-him-to-help-uk-government-with-haulage-12424127>

Slawther, E. (2020). Flu Jab Demand To Continue Exceeding Manufacturing Capacity, Warns GSK. C+D: Community Pharmacy News, Analysis & CPD. <https://www.chemistanddruggist.co.uk/CD006583/Flu-jab-demand-to-continue-exceeding-manufacturing-capacity-warns-GSK>

Stuurman, A., Rizzo, C., & Haag, M. (2021). Investigating The Procurement System For Understanding Seasonal Influenza Vaccine Brand Availability In Europe. PLOS One. DOI: <https://doi.org/10.1371/journal.pone.0248943>
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0248943>.

Thompson, J. (2017). £40m Seqirus Flu Jab Investment Creates Almost 100 New Jobs For Liverpool. Liverpool Echo. <https://liverpoolecho.co.uk/trem.media/news/40m-seqirus-flu-jab-investment-13882365>

Torjesen, I. (2018). Flu Vaccine Shortages: NHS England Must Improve Planning To Avoid a Repeat Of This Year's Delays. *BMJ* 2018;363:k4547. DOI: <https://doi-org.proxy.lib.umich.edu/10.1136/bmj.k4547> <https://www-bmj-com.proxy.lib.umich.edu/content/363/bmj.k4547.full>.

UK Health Security Agency. (2022). Seasonal Flu Vaccine Uptake In GP Patients: Monthly Data, 2021 to 2022. UK Health Security Agency. <https://www.gov.uk/government/statistics/seasonal-flu-vaccine-uptake-in-gp-patients-monthly-data-2021-to-2022>

U.S. Chamber of Commerce. (2021). Understanding U.S.-China Decoupling: Macro Trends and Industry Impacts. U.S. Chamber of Commerce. https://www.uschamber.com/assets/archived/images/024001_us_china_decoupling_report_fin.pdf.