Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. Public Health 123 (2009) 247-254

Contents lists available at ScienceDirect

Public Health

journal homepage: www.elsevierhealth.com/journals/pubh

The role of law in pandemic influenza preparedness in Europe

R. Martin*

Special Issue

Centre for Research in Primary and Community Care, University of Hertfordshire, Hatfield, UK

ARTICLE INFO

Article history: Received 7 October 2008 Received in revised form 11 December 2008 Accepted 6 January 2009 Available online 4 March 2009

Keywords: Pandemic Europe Legal powers Legislation Emergency powers

SUMMARY

The European Union (EU) is composed of 27 states with widely varying histories, economies, cultures, legal systems, medical systems and approaches to the balance between public good and private right. The individual nation states within Europe are signatories to the International Health Regulations 2005, but the capacity of states to undertake measures to control communicable disease is constrained by their obligations to comply with EU law. Some but not all states are signatories to the Schengen Agreement that provides further constraints on disease control measures. The porous nature of borders between EU states, and of their borders with other non-EU states, limits the extent to which states are able to protect their populations in a disease pandemic. This paper considers the role that public health laws can play in the control of pandemic disease in Europe.

© 2009 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved.

Introduction

The 27 states of the European Union (EU) form a political and economic community with supranational and intergovernmental responsibilities, and constitute a single market that seeks to guarantee the freedom of movement of people, goods, services and capital between member states. The emergence or re-emergence of diseases such as severe acute respiratory syndrome (SARS) and tuberculosis highlighted the need for EU-level health policy, and led to the Community Action Programme 2003-2008 in the field of public health. This programme is now the cornerstone of Community public health strategy, focusing on health information and on the Community's capacity to react to health threats. In the context of disease control, the executive arm of the EU, the European Commission (EC), has responsibility for the co-ordination of epidemiological surveillance of disease between member states and for regulating matters such as case definitions, disease notification and development of disease networks across Europe. The EC is assisted by the European Centre for Disease Control (ECDC), which issues protocols on matters of disease reporting and communication of disease information between states and to the EC.

The EC and ECDC can only recommend appropriate disease control measures to states. Neither is responsible for the

governments. It is member states, not the EU, which are signatories to the revised International Health Regulations (IHR) 2005, although the IHR recognize the role of 'regional economic integration organizations' such as the EU.^a Thus, if the World Health Organization (WHO) were to recommend under the IHR measures falling within EU legislation, such as restrictions on the movement of goods or the processing of personal data,^b the EU would need to act collectively, at the initiative of the EC, as member states would be unable to take unilateral action. Otherwise, IHR responsibilities lie with individual states. In 2007, a report on pandemic influenza preparedness in the EU¹

management of disease protection and control in individual states. Public health powers in relation to disease lie with national

noted that substantial progress had been made in preparing for a possible pandemic influenza, but it remained the case that disease control operated at national level. Despite encouragement from the EU towards harmonization of approaches, European national plans vary widely in the strategies they have adopted and the public health powers they propose for implementation of those strategies. Harmonization of legislative responses to infectious diseases, based upon sound evidence, will be necessary if collaborative efforts in support of infectious disease control are to be effective. To assist in





Tel.: +44 1707 285249; fax: +44 1707 285995. E-mail address: R M Martin@herts ac uk

^a IHR Article 57(3) states that 'Without prejudice to their obligations under these Regulations, States Parties that are members of a regional economic integration organization shall apply in their mutual relations the common rules in force in that regional economic integration organization'.

For example IHR Article 45

drawing together national responses to pandemic disease, the PHLawFlu project^c was funded to develop public health law expertise across Europe,² and to examine the legal underpinning of pandemic disease preparedness across the EU and five further European states.^d This paper examines obstacles to European commonality of legal responses to communicable disease.

National public health law in Europe

There is no doubt that law is an important tool in containment of communicable and non-communicable disease. In the context of pandemic influenza, it is considered that social measures authorized by law will be at least as important as medical interventions.³ Evidence from the 1918 influenza pandemic suggests that compulsory home isolation and guarantine were not particularly effective disease control measures because of the difficulty in diagnosing mild cases. Nor were such measures likely to be feasible beyond the initial cases.⁴ However, compulsory interventions such as school closures, closure of public places and restriction of mass gatherings, along with disease surveillance and hygiene improvement, have proved effective both in influenza outbreaks and in the SARS epidemic.⁵ International and EU instruments require states to undertake such measures, many of which will require a legal underpinning. The requirement of compliance with the revised IHR and the globalization of disease information and exchange have prompted many states to revise their public health laws. Other states, which had no public health legislation, have now enshrined public health laws in legislative form. These initiatives were long overdue. Across Europe, as elsewhere, national public health laws tended to be old, based on flawed science, and to predate contemporary understandings and protection of human rights.^{6,7}

The allocation of responsibility for public health practice and the role of the state in regulating private behaviours have very different histories across Europe.⁸ Not surprisingly, states have adopted very different positions on the issue of the extent to which constraints can be placed upon individuals for the public benefit. Earlier research on European national public health laws in relation to tuberculosis⁹ enabled the identification of four different 'families' of public health legislative models in Europe. These were: authoritarian (the enforcement of a high number of compulsory control measures); moderate (the enforcement of predominantly compulsory control measures without recourse to prevention powers such as compulsory vaccination or population screening); preventive (where compulsory provisions were oriented towards preventive measures, including screening, medical examination and/or vaccination, rather than compulsory treatment or detention); and the laissez faire model, where few or no compulsory measures existed.

A further complication to a comparison of national legal approaches to disease control is the range of different legal systems in Europe. While the majority of European states have a civil law legal system based on the French or German systems, some states operate common law systems,^e the former Soviet states have vestiges of Soviet law, and the legal systems of the Scandinavian states recognize civil law overlain with some common law. Whereas the definitive public health law of some states can be found in statutory form, other states also include the binding decisions of courts. Some national legal systems recognize customary law, local edicts or administrative orders as having legal authority. It cannot be assumed that because a particular power does not lie within public health legislation, that power does not exist. Determination of the full range of public health legal powers across European states is a technical and difficult task.

Pandemic preparedness planning across Europe

Following the EU Working Paper on Community Influenza Pandemic Preparedness and Response Planning in 2004,¹⁰ European states have published national preparedness plans. As with the range of approaches to law, there is a wide range of approaches to pandemic preparedness planning across Europe. Coker and Mounier-Jack examined 21 European national plans against a WHO checklist and found considerable gaps and inconsistencies among preparedness plans, with implications for health in both individual states and for Europe as a whole. The authors noted that

'the EU has a critical function in protecting its citizens from public health threats. The role of the EU will be essential to ensure improved sharing of knowledge on pandemic response among EU members, to support the effective provision of services, and to coordinate the response at a community level'.¹¹

Few plans address the extent to which proposed interventions are authorized by their national laws. Indeed, few state plans acknowledge the need for legal authorization for their proposed measures, and there is often a lack of clarity about the legality of measures.^f While there is some commonality across European states in the measures considered appropriate in an epidemic, the formulation of those measures differs from state to state, reflecting the culture and social priorities of individual states. Across Europe, states have proposed disease reporting networks, social distancing powers, restriction on travel and trade, closure of premises and facilities, and measures regulating the provision of goods and services. However, the extent and scope of these powers vary widely. While most states contemplate powers of isolation and quarantine, some states also propose quarantining flight crews, and authorize compulsory vaccination, compulsory administration of prophylaxis, and compulsory medical treatment. Most states authorize the closure of schools and leisure facilities in a pandemic, but some states would also close diplomatic and consular representation, restrict trade union activity or prohibit visitors to inpatients in hospitals. There is variation in the extent to which states will be prepared to requisition persons and property.

Many states have passed, or are in the process of passing, new legislation to support their preparedness planning. In England and Wales, for example, the Health and Social Care Act 2008 has introduced into the Public Health Act 1984 new powers of isolation outside a hospital, powers of quarantine, powers to require the wearing of protective equipment, powers to require people to attend counselling or disease risk training, and the power to require individuals to provide health information. It also provides for the application of compulsory power orders to groups of persons as well as to individuals, provides new border control measures and imposes new obligations to monitor health risk.

States that had taken a liberal approach to intrusion on individual liberties for the benefit of the public health have, in the face of the threat of a pandemic, passed laws providing considerable public health powers. French public health law had previously

^c The PHLawFlu project has received funding from the EU in the framework of the Public Health Programme.

^d Croatia, Turkey, Iceland, Liechtenstein and Norway.

^e Including the countries of the UK, Ireland, Malta and Cyprus.

^f The Spanish preparedness plan, for example, expresses concern regarding the legality of proposals for isolation, restriction of movement and the proposal to make compulsory the administration of antivirals to staff in contact with patients, noting that 'the legal services of the Ministry of Health will need to study the legal aspects relative to compulsory vaccination and isolation and the restriction of movement according to the Constitutional Act 3/1996 of 14 April of Special Public Health Measures in Public Health, Articles 2 and 3'.

focused on preventive measures and provided few compulsory powers for disease control.⁹ The new French Public Health Code now authorizes isolation and guarantine, obliges individuals to submit to temperature checks, and provides powers to close facilities such as schools, restrict use of public transport, requisition health personnel including students and retired persons, and regulate distribution of medicines. School buildings will be used as centres for vaccination and for accommodation of vulnerable persons. The new Code withdraws employment rights such as the right not to work in a situation of danger. Employees and public servants in France currently have the right to withdraw from their workplace if they reasonably believe that their work situation presents a grave and imminent danger to life and health, provided that they have alerted their employer to the danger and provided that their leaving does not create a new risk for others. Under the new Code, which only applies in the particular case of pandemic influenza, this right of withdrawal will not apply in circumstances where the employer has taken all foreseeable measures to reduce the risk of exposure to disease.

The formulation of public health measures across Europe reflects cultural values and priorities. French law, for example, proposes the possible closure of schools in an epidemic, but the new French Public Health Code, recognizing the importance of education in France, provides very specific measures to protect the right to education of its children. The Code acknowledges the need for school closures because children are more susceptible to the influenza virus than adults. However, the Code requires that during a school closure, every effort must be made to continue educational provision via the Internet, radio and television, and sets out detailed provisions on ways in which education might be continued throughout the pandemic.

Emergency powers

The difficulty of predicting what legal powers will be needed to exercise effective disease control has led some states to include in their public health legislation a power to make emergency regulations to provide powers that were not foreseen or which would not be appropriate outside an emergency. The Health and Social Care Act 2008 for England and Wales, for example, proposes that where there is sufficient urgency, a legal instrument may be made without following normal parliamentary procedures.¹² The regulation will then cease to have effect after 28 days, unless it has been ratified by a resolution of each of the Houses of Parliament. The new French Code allows that in the case of a grave threat calling for urgent measures, particularly in the case of an epidemic, the minister responsible for health can, by means of an *arête*, dictate in the interest of public health measures that are proportionate to the risk and appropriate to the time and place, in order to prevent or to limit the consequences of possible threats to the health of the population.

In addition to emergency powers specifically addressed to pandemic disease, many European^g and other^h states have also introduced or updated separate emergency powers legislation to address unexpected threats, to authorize measures that would not normally be acceptable, or to provide powers as a last resort in the face of emergencies where existing legislation is insufficient. Other states have constitutional provisions authorizing emergency powers.ⁱ It has until now been the case that for the purpose of legislation, emergencies have been conceptualized as aberrations, normally involving an aspect of violence such as war, rebellion or a violent natural disaster. European emergency powers have generally been limited to a 'state of siege' (France), armed rebellion (Hungary), or industrial and natural disasters such as earthquakes or the forest fires in Greece. They have not been considered a tool for disease control.

In the UK, the Civil Contingencies Act 2004 has replaced the 1920 Emergency Powers Act^j in relation to temporary special legislation to respond to serious emergencies. The Emergency Powers Act had provided power to make emergency regulations, following a royal proclamation of a state of emergency, in case of an interference with the supply or distribution of food, water, fuel, light or the means of locomotion that deprived the community, or part of it, of the 'essentials of life'. The Civil Contingencies Act expands the domain of emergency powers so that an emergency is widely defined to include 'an event or situation which threatens serious damage to human welfare', which could potentially include a public health threat such as a serious disease outbreak. While no regulations have been passed to date, there is clearly scope for a heavy-handed response in the event of a public health threat.

The Civil Contingencies Bill in its original form underwent prelegislative scrutiny by a Joint Committee which noted that the Bill:

'in the wrong hands, [the Bill] could be used to undermine or even remove legislation underpinning the British Constitution and infringe human rights. Our democracy and civil liberties could be in danger if the Government does not take account of our recommended improvements'.¹³

The Bill was revised and the Government agreed to remove a clause that would have prevented emergency regulations from being subject to judicial review with the consequence that the regulations could not be suspended or struck down by a court if they were challenged on human rights grounds. The Committee recommended that certain Acts of Parliament of major constitutional significance should be exempted from a power to modify or disapply legislation, but this remains in the final legislation. The Committee also proposed that those powers set out in Part 2 of the Bill should be subject to a 'sunset clause' and expire every 5 years from royal assent unless renewed by Parliament. This was rejected by the Government as inappropriate, because the Bill contained enabling powers that were intended to deal with a problem that was 'not short-term'. This suggests that a new approach is being taken to the meaning of 'emergency'.

Under earlier emergency powers legislation, an emergency was determined by a royal proclamation, but under the Civil Contingencies Act, a state of emergency is to be announced, without initial reference to Parliament, by the Secretary of State or a senior minister. Public health emergency planning in the UK appears to acknowledge that the Civil Contingencies Act will have a more general role in the control of disease, although how these plans relate to new powers under the Public Health Act 1984 remains to be seen. A senior spokesperson from the English Department of Health told the author that the Department does not intend to use emergency powers contained in the Civil Contingencies Act for pandemic influenza.^k The reforms to the Public Health Act 1984, including disease emergency

^g For example, the UK, Finland, Belgium, Norway, Slovakia, Sweden, Estonia and the Czech Republic.

^h See, for example, the Canadian Emergency Management Act 2007 and the Australian Health Security Act 2007.

ⁱ For example, Article 16 of the French Constitution, and German Article 115a (F.R.G).

^j The Civil Contingencies Act also repealed the Emergency Powers Act (Northern Ireland) 1926.

^k Personal communication with the author at a meeting with the Department of Health on law and pandemic preparedness.

powers, contained in the Health and Social Care Act 2008 should provide all the necessary legal powers to contain and control disease. However, it is clear from government documents on pandemic planning that there is every expectation that Civil Contingencies Act powers will be used should the need arise.^{14,15}

The Finnish national preparedness plan for pandemic influenza¹⁶ recommended amending Finland's 1991 Emergency Powers Act so that a major epidemic can be classified as a state of emergency as defined in the Act. Previously, an emergency was defined to include an armed attack against Finland, a serious violation of the territorial integrity of Finland, a threat of war, a serious threat to the livelihood of the population or the economy by interrupted import of indispensable fuels and other energy, or a catastrophe. Finland's Communicable Disease Act of 2005 already contains quite intrusive powers including the power to administer compulsory mass vaccination by the defence forces, compulsory medical treatment, isolation from the workplace, and disease reporting that discloses personal information.

The concern with use of emergency powers for disease control is that disease control ceases to be a matter of health protection, and becomes an issue of foreign and national security, with the risk of being hijacked by the agendas of security policy and politics.^{17,1} This has become even more pronounced with the merging of responses to naturally occurring infectious disease and bioterrorism within emergency powers legislation. The WHO and European Commission have both established committees with responsibility for public health as a security issue.^m It is questionable whether the suspension of separation of powers and potentially of civil rights and liberties is justified in the name of public health, and arguable that recognition of human rights is essential for dealing effectively with an epidemic. Draconian guarantine measures can be counterproductive, and may even encourage people to avoid seeking medical treatment. Emergency powers exercised for public health reasons treat citizens as the enemy, and reinforce the philosophy of original public health legislation which classified diseased persons as a public health nuisance to be removed and excluded from society for the benefit of the well.¹⁸ Hong Kong, which has had recent experience of epidemic disease, considered but rejected expanding its Emergency Regulations Ordinance to cover pandemic influenza, concluding that public health powers were sufficient and appropriate to disease control even during a pandemic.ⁿ Hong Kong has instead amended its Quarantine and Prevention of Disease Ordinance in the light of its SARS experience.¹⁹

Emergency powers and human rights

All Council of Europe member states are party to the European Convention for the Protection of Human Rights and Fundamental Freedoms, and any person whose Convention rights have been violated by a state party can take a case to the European Court of Human Rights. In the UK, the Human Rights Act 1998 brings provisions of the Convention into UK domestic law and enables human rights actions to be brought in a domestic court. Rights with particular relevance to public health powers include Article 2 (right to life), Article 3 (an absolute right to freedom from torture and inhumane and degrading treatment), Article 5 (a qualified right to liberty) and Article 8 (a qualified right to private and family life). In *Enhorn v Sweden*,²⁰ a human immunodeficiency virus (HIV)-

positive man detained by Swedish public health authorities on public health grounds successfully challenged his detention on the grounds that it breached Articles 5 and 8 of the Convention. The European Court of Human Rights held that any detention must comply with the principle of proportionality, there must be an absence of arbitrariness, detention must be a last resort measure, and any detention must have as its objective not only protection of the healthy but also care of the ill.²¹

There has been little judicial challenge in British courts of the exercise of emergency powers. In relation to the English Emergency Powers Act and the Emergency Powers (Defence) Act, the courts have played a minimal role, striking down only a handful of emergency measures as ultra vires, usually well after the emergency. More recently, in a case where the British Parliament had sanctioned the indefinite detention of any person not a British citizen and certified as a 'suspected terrorist', and where the Government had derogated from both the European Convention and the International Covenant on Civil and Political Rights (ICCPR) on the grounds that there was a 'public emergency', the House of Lords rejected the Government's assertion that the derogation was consistent with the European Convention. Although the majority of judges declined to question whether there was a public emergency on the grounds that the existence of such an emergency was largely a matter for the Government to determine, they concluded that imprisonment of non-citizens alone was neither proportional, given the equal threat from citizens, nor necessary, and questioned the irrationality of singling out a minority (non-citizens) for special burdens, when members of the majority could present an equal risk.²² Lord Hoffmann was prepared to consider the notion of an emergency and he found it to be a threat to the 'organised life of the community', which would include not merely a threat to the physical safety of the nation, but also to its fundamental values: 'The real threat to the life of the nation, in the sense of a people living in accordance with its traditional laws and political values, comes not from terrorism but from laws such as these.²³ The decision suggests a judicial role in overseeing government powers in emergencies.

The concept of a 'public emergency' is considered under Article 15 of the European Convention for the Protection of Human Rights and Fundamental Freedoms as 'a situation of exceptional and imminent danger or crisis affecting the general public, as distinct from particular groups, and constituting a threat to the organised life of the community which composes the State in question."⁰ Article 15 allows that states might derogate from some of their obligations under the Convention 'in time of war or other public emergency threatening the life of the nation', but not from Article 2 (right to life) or Article 3 (prohibition of torture and inhuman or degrading treatment). The former European Commission of Human Rights, which in 1961 defined a public emergency to consist of a 'threat to the organised life of the community',²⁴ was called upon to determine the criteria of a public emergency threatening the life of the nation in a case in which the Greek Government sought to justify derogation of rights on grounds of a public emergency.²⁵ The Commission held that the emergency must be actual or imminent; it must affect the whole nation; the continuance of the organised life of the Community must be threatened; and the crisis or danger must be exceptional, in that the normal exceptions permitted by the Convention for the maintenance of public safety, health and

¹ In Reference 17, Page 13 notes that infectious disease constituted a threat to peace and development.

^m The WHO Global Security Committee and the EC Health Security Committee. ⁿ Personal communication with senior members of the Department of Health, Hong Kong.

^o Article 4(1) of the ICCPR is expressed in similar terms. The UK gave notice in May 1976, under Article 4(3) of the ICCPR, to the UN Secretary-general of the existence in the UK of a public emergency threatening the life of the nation arising from campaigns of organized terrorism related to Northern Ireland.

order are inadequate. Derogations may only last for as long as, and only be exercised to the extent required by, the demands of the circumstances. They must not limit the subject's rights of access to court protected in Article 6 of the Convention, nor the right of a remedy protected in Article 13. In circumstances where a state wishes to exercise emergency powers which might contravene human rights, the state is required to make a formal derogation under Article 15 of the European Convention indicating the rights and the territory to which the derogation applies,²⁶ and to keep the Secretary General of the Council of Europe informed of the measures taken, the justifications, and the cessation of operation of emergency powers.²⁷ Similar requirements can be found in the ICCPR.²⁸ If European states are to abide by their commitments under the Convention, it seems that use of emergency powers will be subject to human rights examination. States will not then be able to exercise their powers in an arbitrary way, and will not be able to respond in a manner that is not proportional to the risk.

Despite these safeguards, the use of emergency powers legislation for serious ongoing disease outbreaks is questionable. An influenza epidemic could, on a worst case scenario, last for years, which would potentially allow the operation of emergency powers that derogate from human rights protections for a considerable period of time. There is a danger that laws made in the form of emergency regulations might, if in force for long enough, become embedded in the legal system and so constitute a permanent assault on liberties which had previously been achieved, as might be suggested of terrorism legislation in the UK.²⁹

Emergency powers in the context of disease, based as they are on responses to war and catastrophes, tend to operate in such a way that persons affected with disease are characterized as the enemy. They propose that in public health emergencies, there must be a trade-off between the protection of civil rights and effective public health interventions. However, the ideals of democracy, individual rights, legitimacy, accountability and the rule of law suggest that even in times of acute danger, government should be limited in the activities that it can pursue and the powers that it can exercise. As Gostin points out in the context of the US Model State Emergency Health Powers Act,³⁰ this is not to say that individual rights should always trump public health, but that individual rights should never be infringed 'unnecessarily, arbitrarily or brutally'.³¹ Nevertheless, there has been significant criticism of the US legislation, and concern that measures proposed in the Act are sufficiently dangerous as to 'undermine...constitutional values'.³² While emergency powers might provide short-term solutions to serious threats, they could also do long-term harm to public trust in public health services, and encourage health behaviours which are counterproductive to the public health.

In many countries, including the USA,³³ there are signs that public health and national security are increasingly conflated. The IHR are framed around the assumption that disease is a security issue.³⁴ However, the danger of subsuming disease control within foreign and national security is that the focus is on security rather than on health. Wider national and international interests may not always coincide with public health. Global public health may not always coincide with the security concerns of individual states, particularly more powerful states. McInnes and Lee note that policy responses to the SARS epidemic elicited a 'garrison mentality' whereby strict border controls and control of movement of persons became central to disease containment, with consequences for the movement of persons, goods and services.³⁵

It has been widely argued that the promotion and protection of human rights is inextricably linked to the promotion and protection of public health, and that lack of respect for the rights and dignity of persons or groups of persons can increase their vulnerability to disease contagion.^{36,37} The importance of human rights to health has been acknowledged in the revised IHR Article 3, which requires that the IHR be implemented with full respect for the dignity, human rights and fundamental freedoms of persons. As Mann argues,

⁴...the human rights framework is indispensable both for analyzing the central societal issues which must be confronted and for guiding the direction of societal transformation needed to promote and protect health.³⁸

States have a significant number of non-medical tools at their disposal in a disease pandemic, and public health law reform has been undertaken with pandemic influenza in mind. Public health legislation around the world now authorizes a wide range of social distancing powers and compulsory screening, examination and treatment measures. In addition, much public health legislation provides for the possibility of some limited emergency measures. Nevertheless, some European states have proposed the use of emergency powers legislation to provide exceptional powers in the case of a pandemic; powers which will inevitably constrain the rights of individuals. The evidence base for the need for such exceptional powers has yet to be established, and in the absence of such evidence, there is concern that too heavy a hand will result in long-term harm to public trust in the exercise of population-based disease prevention strategies.

Border issues in Europe in a disease pandemic

Early responses to public health threats as reflected in 19th Century public health legislation were premised on building fortresses to protect the healthy (and generally wealthy) from those suffering from disease, rather than on care and protection of the population. Public health legal powers tend to focus on containment and exclusion, representing

'the community response to social and economic pressures and the wide spread fear of death and disease'³⁹

rather than on positive public health outcomes. Immigrant populations have long been targeted as carriers of disease, and in relation to diseases such as drug-resistant tuberculosis, increasing incidence in the Western world is often attributed to persons entering from states with high tuberculosis rates.⁴⁰

Much contemporary public health policy has rejected the 'fortress' approach to disease control in favour of seeing the public health mandate as imposing duties upon all members of a society or population,¹⁸ or indeed duties of global health protection. The evidence base for border control as a public health, as distinct from a security, measure is limited, especially in a pandemic.⁵ In relation to other diseases such as HIV and tuberculosis, border screening has proved to be unreliable and has shown little benefit for the health of the population.⁴¹ Compulsory border screening and refusal of entry to affected persons are contemplated by many states in their pandemic influenza preparedness plans,^p and the revised IHR 2005 contemplate that WHO might recommend refusal of entry of suspect and affected persons and refusal of entry of unaffected persons to affected areas,⁴² subject to the ethical consideration of respect, to the extent possible, for the individual right to freedom of movement.⁴³ Article 19 of the IHR requires all signatory states to establish points of entry with surveillance and border control capacities.

A consequence of having no internal EU borders is that the EU needs a strong common external border. Under the 2004 EU Free

^p For example, Bulgaria, Denmark, Greece and Latvia.

Movement Directive,⁴⁴ member states may deny entry of EU citizens and their family members if they are considered to be a threat to public health, but only if this is proportionate and meets strict material and procedural safeguards. Most EU member states^q have signed the Schengen Convention, eliminating border controls between participating countries and creating an external frontier. The Convention called for a common visa policy, harmonization of policies to deter illegal migration, and an automated Schengen Information System to coordinate actions in relation to individuals who had been denied entry. The 1997 Amsterdam Treaty incorporated the Schengen Convention into EU treaties, and set out a plan to integrate policies on visas, asylum, immigration and external border controls into Community procedures and into the Community legal framework. This has resulted in what is for all intents and purposes an EU external border, with much social and economic activity operating at regional rather than national level. However opt-out^r and opt-in^s possibilities make it difficult to define an administrative space that falls within the frontier, and there is no overarching political control.⁴⁵ Rather, decisions are made by means of a complexity of intergovernmental and supranational institutions, and there remains considerable sovereign power in relation to many issues of border and public health relevance. The Schengen Agreement includes consent to share information about people, via the Schengen Information System. This means that a person cannot 'disappear' simply by moving from one participant country to another. A country is permitted by Article 2.2 of the Schengen Agreement to reinstate border controls for a short period if it is deemed to be in the interest of national security. Any Schengen country can impose temporary or permanent border controls if it believes itself to be unprotected by other members. Under this provision, Portugal restricted border entry during the 2004 European Football Championship, as did France for the ceremonies marking the 60th anniversary of D-Day, and again shortly after the London terrorism bombings of July 2005. With foot-and-mouth disease having been confirmed in France, the Netherlands and Britain, Norway, in particular, put its border officers on high alert to prevent spread of the disease into the country. Other Nordic countries have also increased spot checks on entries into the region, irrespective of their new borderless status, in an attempt to contain foot-and-mouth disease.

Under the Schengen Borders Code, third-country nationals may be refused entry if considered a threat to public health. One issue that arises from the lack of border controls within Europe is the disparity in levels of disease preparedness across Europe. In 2004, 10 new member states joined the EU, eight of which are former communist countries in central and eastern Europe (Slovenia, Hungary, Czech Republic, Poland, Lithuania, Latvia and Estonia). These states are characterized by a history of underfunding of health and surveillance systems, unreliability of access to drugs, continuing increase in diseases such as drug-resistant tuberculosis and HIV/acquired immunodeficiency syndrome, and inadequate public health responses to disease.⁴⁶ Since these states have entered into the EU, citizens can cross borders into other, better-resourced states. In the context of a pandemic, this could mean an influx of persons who are possible disease carriers from poor states with a frail public health system and with insufficient medicines, to other EU states, putting citizens at risk and draining health resources in those states. This creates difficult choices for host countries in terms of the assistance they offer. Should they fail to offer healthcare services to mobile populations, these populations will put state population health at risk. Should they offer healthcare services to mobile populations, this will strain resources and drain services from home populations.

In their comparative study of European national preparedness plans.¹¹ Mounier-lack and Coker found that 15 EU states intended to take at least one measure to restrict travel to and from the state during a pandemic, and 13 of these states recommended border restrictions on entry and departure. One state proposed drafting new laws to give stronger border control powers. Other states, however, conceded that by Phase 6 of a pandemic,⁴⁷ while there might be political grounds for restrictions on travel, there would be little public health benefit. The possibility of border closure was an issue examined in Exercise Common Ground, a pandemic influenza exercise for the European Union, conducted by the UK's Health Protection Agency over a 2-day period in November 2005.⁴⁸ This was the second of two EU exercises commissioned by the EC to evaluate the ability and capabilities of member states to respond to a health-related crisis, in this case an influenza pandemic. Concern was expressed when Switzerland indicated that it might consider the closure of its borders, given the location of drug manufacturers in Switzerland, France's border closure proposals contained exceptions for pharmaceutical and vaccine materials and workers. The feasibility of instituting border controls within Europe in a pandemic was then examined at an EU Pandemic Influenza Workshop in August 2007.⁴⁹ It was concluded that while border closure might be a useful early containment strategy, at a pandemic stage, it would be impractical to enforce border controls within Europe because of the porous nature of European borders and because of the need for cross-border traffic of goods. Any prolonged border control would disrupt critical supply chains, and there was a risk that the consequent disruption of border controls within Europe would result in greater harm than benefit.⁵⁰

Screening at borders for diseases such as tuberculosis and HIV is common practice in many states, but has been much criticized on grounds of evidence and ethics.⁴¹ A systematic review looking at the effectiveness of physical interventions such as screening in relation to respiratory viruses concluded that

'(g)lobal and highly resource intensive measures such as screening at entry ports...lacked proper evaluation'.⁵¹

There is also limited evidence regarding the efficacy of screening international passengers on departure or arrival in a flu pandemic, except possibly in the early phase. While control and screening measures may have worked in the days of slow travel, it is now the case that travel times are likely to be shorter than incubation periods, such that port screening will be ineffective in disease identification. Nevertheless, the Mounier-Jack and Coker study found that eight EU states proposed entry screening in their pandemic preparedness plans.¹¹ Some European states indicated in Exercise Common Ground that they intend to undertake border screening regardless of the evidence base, on the grounds that such measures provide reassurance to the public, and because the surveillance information might prove useful. The IHR 2005 authorize states to require information from travellers about their travels, and to undertake a non-invasive medical examination which is the least intrusive to achieve the public health objective.⁵² Entry may be refused where the traveller refuses to co-operate.⁵³

Article 31 of the IHR provides that invasive medical examination,^t vaccination or other prophylaxis shall not be required as

^q Thirty states have signed the agreement, and 15 have implemented it. The 10 new EU member states (mainly former Soviet states) that acceded to the EU, and thus to the Schengen Agreement, in 2004, have, with the exception of Cyprus, agreed to implement the agreement in December 2007 for overland borders and seaports, and in March 2008 for airports.

^r The Republic of Ireland and the UK only participate in the police co-operation measures and not the common border control and visa provisions.

^s There are three non-EU members (Iceland, Norway and Switzerland).

^t 'Invasive' is defined in Part 1 of IHR 2005 as 'the puncture or incision of the skin or insertion of an instrument or foreign material into the body or the examination of a body cavity'.

a condition of entry except in limited circumstances, such as to determine whether a public health risk exists, or in relation to persons seeking temporary or permanent residence. In these circumstances, if a traveller refuses to comply, entry may be refused or be made subject to the least invasive procedure to achieve the public health objective. Article 23 stipulates that such measures be undertaken within the confines of express informed consent and national and international safety guidelines, and Article 32 requires that in implementing measures, travellers are to be treated with dignity and respect, and with recognition of gender, sociocultural, ethnic or religious concerns.

Within the EU, border measures are a matter of Community competence that require state co-ordination. Where EU member states intend to adopt border measures for the control of communicable diseases, they must inform and, where possible, consult other member states and the Commission in advance. The Exercise Common Ground Report and the EU Pandemic Influenza Workshop concluded that there was variability in the extent to which member states, European Economic Area states (including all EU countries plus Iceland, Norway and Liechtenstein) and Switzerland have included an international dimension in their pandemic influenza plans. Rather, they have focused on national, domestic issues. It is necessary to consider an international dimension because:

'In a community like the EU, free of internal borders and with many common activities and free movement of people and goods, any countermeasures taken in one Member State will be bound to affect at least some if not all, other Member States'.⁵⁴

The reports noted that states also needed to address issues surrounding expatriates, travel restrictions, restriction of emigration, issues of contact persons and the potential for social disorder. There was a lack of clarity around Community law on implementation of travel restrictions, and some confusion regarding the extent to which issues of freedom of mobility needed to be handled differently according to an individual's nationality. To be practical and costeffective, border measures would require policy coordination between countries of arrival and departure, and consensus between neighbouring states to avoid disruption. However, as Mounier-Jack and Coker note,¹¹ few countries address the issue of collaboration with neighbouring states on matters of travel restrictions in their plans:

'There is clearly a need for countries within a European region to be informed and to inform others of their respective strategies in order to ensure that policies are consistent where necessary, or pose as few challenges as possible to public health protection where differences or inconsistencies exist. There may also be a need to ensure that European response mechanisms work together in harmony if public health interventions are to be similar in different countries'.

National generic plans in Europe have addressed issues of border control rather inadequately. Questions have been raised about mobile populations and their implications for healthcare resources, but the issues remain unresolved. There appears to be political reluctance in the context of a united Europe to invoke exemptions from internal market rules of free movement of goods and persons on grounds that neighbouring states are failing to address public health threats, and while there is concern about the consequent risk to populations, most states have taken the pragmatic view that any border control should take place at Europe's external borders and not within Europe.

Conclusion

The variation in public health resources and in public health legal powers across EU states, in a context of free borders, is a concern for Europe-wide pandemic disease strategies. It is not impossible that states with the strongest national public health powers, which permit, for example, compulsory vaccination or detention, will find some citizens moving states to avoid imposition of these powers. Ideally, states within the EU will work together to achieve some commonality of pandemic disease policy and some commonality in their public health legal frameworks. Much has been done to develop common policy approaches to preparation for an influenza pandemic across Europe. However, Article 152 of the European Treaty, which states the EU objective of a high level of health protection and requires the European Community to work with nation states to deal with health threats, does not allow for a policy of harmonization of state laws. The most that can be hoped for is some convergence of legal powers resulting from discussion and negotiation between states. The differing histories, politics, culture and legal systems of this group of highly divergent states does not bode well for agreement across Europe on the appropriate legal response to disease threats.

In an attempt to identify the extent to which there is variation in public health legal powers and the consequences of such variation for public health in Europe, the PHLawFlu project is examining the role of national laws in the control of and protection against pandemic human influenza across Europe.² The objective of the project is to provide an evolving critical study of national laws supporting and constraining defined issues of communicable disease control across Europe, and to provide a resource to support public health law reform and public health policy making in Europe. The project methodology includes workshops bringing together public health policy makers from 32 European states to examine legal responses to disease scenarios. It is to be hoped that some common legal responses emerge from these exercises, and given the absence of attention paid to public health laws in Europe in recent years, that much can be learned by all states on ways in which to use law as a tool in pandemic disease control.

Meanwhile, Europe is in a complex place in relation to its public health approach to pandemic disease. In times of economic strength and freedom from threats of war and disease, the commonality of EU states comes to the fore, and states are ready and willing to engage in joint enterprise. Where states are at threat, however, they tend to turn inward on themselves, and political and cultural differences emerge. In times of threat, states which have traditionally been strong on public intervention in private rights are unwilling to accede to the approaches of more liberal states. Traditionally, liberal states are reluctant to impose draconian measures, but at the same time may be unwilling to carry the public health burden of citizens from poorer states. The revised IHR have done much to focus public health law reform measures and to ensure some minimum commonality of content, but it is clear that some states, in accordance with their legal culture, are prepared to undertake more intrusive interventions than others.

For all these concerns, it is clear that public health laws will be a mainstay of pandemic disease strategies, both in relation to the EU and in relation to nation states within Europe. Public health laws will be essential in providing powers to enable actions to be taken to control disease spread, but also to constrain states from taking actions that might reassure short-term security concerns but that have potentially harmful long-term public health consequences. Of course, such issues are not unique to Europe, but the nature of Europe as a continent and as a legal entity creates particular complications for the ways in which law might best be used to create a coordinated European pandemic disease strategy. One unexpected benefit of the pandemic threat has been the renewed interest in exploring the role of law as a communicable disease tool, and in the examination of the range of public health legal approaches across Europe. Globally, a greater understanding of the role of public health law as a tool for managing and minimizing the spread of communicable disease will be a lasting and invaluable legacy of governance efforts in relation to pandemic influenza.

Ethical approval

None sought.

Funding

None declared.

Competing interests

None declared.

References

- 1. European Centre for Disease Prevention and Control. *Technical report: pandemic influenza preparedness in the EU. Status report as of Autumn 2006.* Stockholm: ECDC; 2006.
- 2. European Public Health Law Network website. Available at: www.ephln.org.
- 3. Smith R. Social measures may control pandemic flu better than drugs and vaccine. *BMJ* 2007;**334**:1341–2.
- New South Wales Department of Public Health. Report on the influenza epidemic in NSW in 1919. New South Wales: William Applegate Gullick; 1920. Section V. p. 141–42.
- World Health Organization Writing Group. Nonpharmaceutical interventions for pandemic influenza, national and community measures. *Emerging Infect Dis* 2006; 12, at p.90. Available at: http://www.cdc.gov/ncidod/EID/vol12no01/05-1371.htm
- Harris A, Martin R. The exercise of public health powers in an era of human rights: the particular problem of tuberculosis. *Public Health* 2004;118:312–22.
- Coker R, Martin R. Introduction. The importance of law for public health policy and practice. *Public Health* 2006; **120**(Suppl.):2–7.
- Da Lomba S, Martin R. Public health powers in relation to tuberculosis in England and France: a comparison of approaches. *Med Law Int* 2004;6:117–47.
 Coker R, Mounier-Jack S, Martin R. Public health law and tuberculosis control in
- Europe. Public Health 2007;**121**:266–73. 10. Available at: http://europa.eu.int/comm/health/ph_threats/com/Influenza/
- com_2004_201_en.pdf [Last accessed 26 January 2009].
- Coker R, Mounier-Jack S. How prepared is Europe for pandemic influenza? An analysis of national plans. *Lancet* 2006;**367**:1405–11.
- 12. Health and Social Care Act 2008. Section 45R.
- Joint Committee on Draft Civil Contingencies Bill First Report, at http://www. publications.parliament.uk/pa/jt200203/jtselect/jtdcc/184/18403.htm#a4 (Last accessed 26 January 2009).
- Cabinet Office and Department of Health. Pandemic flu, a national framework for responding to an influenza pandemic. London: Department of Health; 2007. Point 1.8.
- National Health Service. Pandemic flu, influenza pandemic contingency planning: operational guidance for health service planners. London: Department of Health; 2005.
- Ministry of Social Affairs and Health. Finnish national preparedness plan for pandemic influenza; proposal of the Working Group on National Pandemic Preparedness. Helsinki: Ministry of Social Affairs and Health; 2006.
- Foreign and Commonwealth Office. UK International priorities: a strategy for the FCO. Cmnd 6052. London: HMSO; 2003.
- Martin R. The limits of law in the protection of public health and the role of public health ethics. *Public Health* 2006;**120**(Suppl.):81–7.
- Quarantine and Prevention of Disease Ordinance. Cap 141. As amended 2008.
 [2005] E.C.H.R. 56529/00.

- 21. Martin R. The exercise of public health powers in cases of infectious disease: human rights implications. *Med Law Rev* 2006;**14**:132–43.
- 22. A v Secretary of State for the Home Department. 2004. UKHL 56.
- 23. A v Secretary of State for the Home Department. 2004. UKHL 56. Para. 97.
- 24. Lawless v. Ireland, Judgment of 1 July 1961, No.3 / 1961, 1 EHRR 15. Para. 28.
- 25. Greek case, 12 YB 1, Opinion of the Commission. Para. 53.
- Isayeva v. Russian Federation. ECtHR judgment of 24 February 2005. Para. 191.
 European Commission for Democracy through Law (Venice Commission).
- Zi, European Commission for Democracy through Law (Venice Commission). Opinion on the protection of human rights in emergency situations. Opinion no. 359/2005. Strasbourg: European Commission; 2006.
- McGoldrick D. The interface between public emergency powers and international law. ICON 2004;2:380-429.
- 29. Ferejohn J, Pasquino P. The law of exception: a typology of emergency powers. *ICON* 2004;**2**:210–39.
- 30. Drafted by the Centre for Law and the Public's Health at Georgetown and Johns Hopkins Universities, 2001.
- Gostin L. The model state emergency health powers act. J Am Med Assoc 2002;288:622–8.
- Annas G. Bioterrorism, public health and civil liberties. N Engl J Med 2002;346:1337–42.
- Hunter N. Public-private health law: multiple directions in public health. J Healthcare Law Policy 2007;10:101–32.
- 34. Rodier G, Greenspan A, Hughes J, Heymann D. Global public health security. *Emerging Infect Dis* 2007;**13**. 1447–1452, at 1447.
- McInnes C, Lee K. Health, security and foreign policy. *Rev Int Stud* 2006;**32**:5–23.
 Gostin L. Public health strategies for pandemic influenza: ethics and the law. J
- Am Med Assoc 2006;295:1700-4.
- Mann J, Gostin L, Gruskin S, Brennan T, Lazzarini Z, Fineberg H. Health and human rights. In: Mann J, Gruskin S, Grodin M, Annas G, editors. *Health and human rights: a reader.* New York: Routledge; 1999.
- Mann J. Human rights and the new public health. *Health Hum Rights* 1995;1:229–33.
- MacPherson D, Gushulak B. Human mobility and population health. Perspect Biol Med 2001;44:390–401.
- Lewis J, Chihota V. Increasing drug resistant tuberculosis in the UK. BMJ 2008;336:1201–2.
- Coker R. Compulsory screening of immigrants for tuberculosis and HIV. BMJ 2004;328:298–300.
- 42. International Health Regulations 2005, Article 18.
- 43. World Health Organization. *Ethical considerations in developing a public health response to pandemic influenza*. Geneva: WHO; 2007.
- 44. Directive 2004/58/EC of the European Parliament and of the Council of 29 April 2004, Art. 22.
- Waters W. Mapping Schengenland: denaturalizing the border. Environ Plann D: Society Space 2002;20:561–80.
- Coker R, Atun R, Mckee M. Health-care system frailties and public health control of communicable disease on the European Union's new eastern border. *Lancet* 2004;363:1389–92.
- World Health Organization pandemic phases. Available at: http://www.who. int/csr/disease/avian_influenza/phase/en/ [Last accessed 26 January 2009].
- Health Protection Agency. Exercise common ground: a pandemic influenza exercise of the European Union. Serial 5.0. Final Exercise Report, 27 March 2006. London: Health Protection Agency; 2006.
- Department of Health and Cabinet Office. Pandemic influenza sharing of evidence and response policies across the EU. London: Department of Health; 2007. Available at: http://www.dh.gov.uk/en/Publichealth/Flu/PandemicFlu/ DH_076566. [Last accessed 26 January 2009].
- EU Workshop: pandemic influenza sharing of evidence and response policies across the EU, August 31 2007, London. Workshops 11 and 12 facilitated by Dr Miguel Betancourt Cravioto and Dr Daniel Reynders. See Note 76.
- Jefferson T, Foxlee R, Del Mar C, Dooley L, Ferroni E, Hewak B, Prabhala A, Nair S, Rivetti A. Physical interventions to interrupt or reduce the spread of respiratory diseases: a systematic review. *BMJ* 2008;**336**:77–80.
- 52. International Health Regulations 2005, Article 23.
- 53. International Health Regulations 2005, Article 31.
- 54. Specifications attached to the Invitation to Tender Document, SANCO/C3/ 2004/05, quoted in Health Protection Agency, Exercise Common Ground, A Pandemic Influenza Exercise for the European Union, Final Report. London: Health Protection Agency; 27 March 2006.