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Hospitals' Liabilities in Times of Pandemic: Recalibrating the Legal Obligation to Provide Personal Protective Equipment to Healthcare Workers

Hui Yun Chan[1]

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Abstract

The Covid-19 pandemic has precipitated the global race for essential personal protective equipment in delivering critical patient care. This has created a dearth of personal protective equipment availability in some countries, which posed particular harm to frontline healthcare workers' health and safety, with undesirable consequences to public health. Substantial discussions have been devoted to the imperative of providing adequate personal protective equipment to frontline healthcare workers. The specific legal obligations of hospitals towards healthcare workers in the pandemic context have so far escaped important scrutiny. This paper endeavours to examine this overlooked aspect in the light of legal actions brought by frontline healthcare workers against their employers arising from a shortage of personal protective equipment. By analysing the potential legal liabilities of hospitals, the paper sheds light on the interlinked attributes and factors in understanding hospitals' obligations towards healthcare workers and how such duty can be justifiably recalibrated in times of pandemic.

Keywords Pandemic · Personal protective equipment · Negligence · Harm · Hospitals · Public health

✉ Hui Yun Chan
h.chan@hud.ac.uk

[1] University of Huddersfield, Huddersfield, UK

Introduction

The onslaught of Covid-19 has led to a worldwide race for personal protective equipment ("PPE") ranging from protective goggles, gloves, full face shields, fluid repellent gowns, aprons, surgical masks, and medical equipment such as ventilators and respiratory machines.[1] The British Medical Association has repeatedly issued urgent pleas to the UK government for the timely supply of PPE for frontline healthcare staff in delivering patient care.[2] Frontline healthcare workers without PPE continue to face severe infection risks posed by Covid-19.[3] PPE shortage constitutes a pressure point for healthcare systems, with strong correlations between its scarcity and high Covid-19 infections and death among healthcare workers.[4] Covid-19 has claimed more than 300 healthcare workers' lives, and infected more than 60,000 in the USA,[5] while PPE shortage and substandard PPE in Spain have resulted in more than 31,000 healthcare workers becoming infected.[6] Reports of heightened stress experienced by frontline staff are not new; either from the fear of being infected or in transmitting the infections to their families.[7] The shortage has prompted drastic reactions from some governments in downgrading PPE protection standard inconsistent with WHO advice, inevitably raising questions about harm to healthcare workers.[8] This measure in turn produced several adverse effects on care provision. It has created an exodus of critical healthcare staff due to their inability to continue working. Clinical decisions were made to either delay care or minimise the risks of harm (while still working in high risk environments), underscoring rationing in action, and making difficult situations more taxing. Although they are not compelled to continue treating patients, the inability to do so generated moral guilt as they see their colleagues on the frontline operating in hazardous conditions.

Recent developments have witnessed strong responses from the public and healthcare workers, ranging from pursuing legal actions against the government or their employers (hospitals) for breaching their obligations of care towards employees to calling for a full public inquiry into pandemic management, including the status of the PPE stockpile.[9] Specific claims by healthcare workers include the legality of guidance on reusing PPE and permitting patients to be treated without PPE in contravention of their right to protection of health and safety at work.[10] This development is not only confined to the UK, as doctors in Spain have launched legal actions against the health authorities for breach of duty in PPE procurement failure.[11]

[1] See for example Mahase (2020a, b, c, d).
[2] Cooper (2020), Iacobucci (2020), BMA (2020).
[3] Mason and Friese (2020), Mahase (2020a, b, c, d), Haynes (2020).
[4] Amaro (2020), Togoh (2020).
[5] Stone and Feibel (2020).
[6] De Benito (2020).
[7] Newman (2020), Adams and Walls (2020).
[8] Newman (n 7).
[9] Bowcott (2020), Conn (2020).
[10] Bindmans (2020).
[11] Russell (2020).

Considerable coverage continued to be given to issues concerning allocation of scarce resources, the clinical and moral dilemma to treat, and the urgent need to have protective gears for frontline staff.[12] The pressing legal considerations regarding employer's failures in procuring sufficient resources for pandemic purposes remain under-explored. This paper examines how the pandemic affects the obligations of hospitals as employers towards their frontline healthcare staff in fulfilling their responsibilities during pandemic, and the impetus on re-evaluating existing and future legal obligations. It considers the extent to which hospitals have breached their obligations in failing to take appropriate measures to safeguard the health and safety of their employees and to prevent them from being exposed to avoidable risks. While convincing justifications are available regarding the difficult roles of hospitals during pandemic, significantly persuasive arguments can be made for hospitals' liability in breaching their duty to ensure the safety of healthcare workers. These claims will be considered in determining the extent to which such liability can be recalibrated in times of pandemic. While the analyses are drawn from the UK context, the substantive importance is equally relevant as the battle for critical medical supplies is felt across the world.

How Does Covid-19 Affect the Legal Obligations of Hospitals Towards Healthcare Staff?

Duty of Care to Healthcare Workers as Employees

An employer's duty is personal and non-delegable. The employer's duty is one of reasonable care and skill, to provide a safe place and system of work, with adequate plant and equipment, including competent employees and resources, according to the industry and environment in which they operate.[13] Such obligations extend to maintaining the equipment and ensuring that they are of sufficient quantity, necessitating regular inspections and monitoring.[14] Providing a safe system of work signals a gamut of considerations; ranging from ensuring proper working systems, arrangements and instructions, identifying the purpose of the work, specific tasks and scope to assess risks and install precautionary measures for the employees' health and safety. A system of work thus encompasses an assessment of the adequacy for the "whole course of the job or it may have to be modified or improved to meet circumstances which arise."[15] The consequence of this duty is that the system ought to be *reasonably* safe, and not *perfectly* safe, through assessing the inevitable dangers associated with the work, guided by industry norms.[16] These norms often evolve through time and employers must be aware of such developments in updating their

[12] Emanuel et al. (2020), Ranney et al. (2020).
[13] *Wilsons & Clyde Coal Company v English* [1938] AC 57, Lunney et al. (2017, p 560).
[14] See for example *Smith v Baker* [1891] A.C. 325; *Wilsons & Clyde Coal Co v English* [1938] A.C. 57.
[15] Lord Greene MR in *Speed v Thomas Swift & Co Ltd* [1943] K.B. 557 at 563, 564.
[16] *General Cleaning Contractors Ltd v Christmas* [1953] A.C. 180 at 195.

safety standards to reflect current knowledge based on best scientific evidence.[17] Consequently, though it can be suggested that the science of Covid-19 is still developing, the lack of knowledge regarding its effect may not automatically preclude employers from being liable.

Doctors, surgeons and nurses employed in the service of hospitals are treated as employees under the law and hence they are owed a duty of care.[18] The common law duty of care identified above thus obliges hospitals to provide competent staff, adequate material and a safe, proper system and effective supervision. The extent to which employers ought to provide for PPE invites considerations such as the risk, likelihood, magnitude and consequences of the injury, and the availability and costs of providing such protective equipment.[19] In hospitals, the provision of adequate plant and equipment signifies PPE such as gloves, masks, full length gowns, shields and goggles. Hospital working zones have become "contagion hubs" with streams of patients (symptomatic and asymptomatic) receiving care and treatment from healthcare workers. It is reasonably anticipated that healthcare workers are continuously exposed to significant infection risks from treating these patients. The provision of PPE is directly relevant to the work for which healthcare workers are employed to do, and which are normally and reasonably expected to be provided with, consistent with WHO guidelines for treatment of infectious diseases. The omission to provide PPE to frontline staff unavoidably attracts questions of hospitals' negligence.

In determining whether the employers are negligent in failing to remedy the lack of PPE, reference is made to a number of important factors under the common law and statutory instruments. Factors that illuminate the liability of the parties, such as the nature of the work, its inherent risks, the (im)possibility of establishing precautionary measures in preventing or reducing the likelihood of risks materialising, the extent to which such measures commensurate with the means and ends, are examined. Risk assessments, particularly whether the risks are amplified by the failure to provide in an otherwise acceptable risk in employment, common practices, and resources similarly influence the determination of duty. Statutory duties under the Health and Safety Act, Regulations on PPE 1992, the relevant guidance issued by the Department of Health and Social Care and Public Health England to healthcare workers are relevant considerations.

Risk assessment is an important feature in determining the likelihood of injury and whether a breach has occurred in a system of work. It sets the level of reasonableness of precautionary measures against the health and safety risks employees may encounter in the course of their employment.[20] The specific circumstances and characteristics, including individual vulnerabilities are relevant considerations.[21] *Watt v Hertfordshire* illustrates the kind of end (saving of life) to be achieved that justifies

[17] *Morris v West Hartlepool Steam Navigation Co Ltd* [1956] A.C. 552; *Baker v Quantum Clothing Group Ltd* [2011] 1 WLR 1003; Witting (2018, p 130).

[18] Witting (n 17 pp 592, 593).

[19] *Crouch v British Rail Engineering* [1988] I.R.L.R. 404, CA (provision of goggles).

[20] *Kennedy v Cordia (Services) LLP* [2016] UKSC 6; *Paris v Stepney* [1950] AC 367; Witting (n 17 p 122).

[21] Witting (n 17 p 123).

the firemen assuming risks associated with not having a jack fitted in the truck, thus precluding their employers from liability. It has been questioned whether this approach has unjustly discriminated claimants from emergency services that continue to assume risks for the greater good[22] but is otherwise uncompensated for the injuries sustained. There is considerable force in this reasoning that applies to frontline healthcare workers. They face prolonged risks on a daily basis, which includes periods of emergency and hours with clinical rotations between high and low infection risks zones in hospitals. Their purpose is to save lives, but without PPE they are putting the lives of patients at risk. The likelihood of injury is real and the gravity of the consequences is magnified. While there are risks inherent in patient treatment, infectious diseases attract extra hazardous elements into the work. The seriousness of harm caused to healthcare workers is not considered small. Infected healthcare workers would be off sick, unable to treat, and face the possibility of death. The risks of infection are higher without PPE compared to those with basic PPE. Standard public health practices require healthcare workers to don appropriate PPE. This in turn invites questions on cost and practicability[23] in addressing the risks that persist in daily clinical encounters.

Although frontline healthcare work is not intrinsically dangerous compared to crane workers in the building industry, the cumulative risks arising from Covid-19, and other preventable factors could potentially render such employment dangerous. Healthcare workers combating infectious diseases accept the associated risks that are intrinsic to the work; that does not mean that they have voluntarily assumed all those risks which could be prevented or reduced with the exercise of reasonable care by the hospitals.[24] The example of healthcare staff at Weston Hospital in England who tested positive after contact with infected patients only goes to demonstrate the severity of the situation.[25] If we accept that Covid-19 is hazardous, then it justifies the protection from the risks of infection through PPE provision. PPE constitutes the first line of protection against infections, as they need to be in close proximity to patients. PPE thus can reduce the chances of infection and in some cases prevent further infections among healthcare workers. Such risks clearly outweighed the cost of providing PPE, and the omission to provide is obvious. While the likelihood of the majority of the healthcare workers to succumb to the virus is small owing to the age and health demography, the consequences of such infection materialising are grave if they were infected.

Courts usually take into account established practices in assessing whether the defendants have breached their standard of care given the circumstances prevailing at the time.[26] It can be reasonably said that PPE is a common practice; logical and of common sense in treatment of infectious diseases. Hospitals should act in

[22] Lunney, Nolan and Oliphant (n 13 p 175).

[23] See the justification for the risks present and the cost of remedying the risk: *Latimer v AEC Ltd* [1953] A.C. 643.

[24] Hale LJ in *King v Sussex Ambulance NHS Trust* (2002) 68 B.M.L.R. 177 at 182, CA.

[25] Quinn (2020).

[26] *Mahon v Osborne* [1939] 2 K.B. 14; *Wright v CC* [1952] 2 All E.R. 789.

accordance with such approved, common practice of ensuring adequate PPE supply. The most practical preventive measure, which is providing PPE is not onerous, compared to the risks of injury to healthcare workers. While cases have shown that employers have not breached their duty in failing to provide protective screens or suitable emergency vehicles for the employees at wartime,[27] ultimately, balancing these risks against the measures to remove the risk requires a consideration of the end to be achieved.[28] The end to be achieved in the pandemic context is the dual outcomes of protecting public health and maintaining the health and safety of healthcare workers in the course of their employment.

Statutory instruments have given the duty of care a stronger emphasis. The Personal Protective Equipment at Work Regulations 1992 ("PPE Regulations") under the Health and Safety at Work Act 1974 clearly set out the types of legal responsibilities that employers should follow. PPE under the Regulations means "all equipment…intended to be worn or held by a person at work and which protects the person against one or more risks to that person's health or safety, and any addition or accessory designed to meet that objective."[29] Consequently, PPE in the hospital context is broad enough to include all equipment that protect healthcare workers from infectious particles arising from aerosol generating procedures, ventilators, respirators or testing facilities with high concentrations of droplets or airborne diseases. Regulation 4(3) provides the litmus test for the suitability of such PPE. PPE are considered "suitable" relative to the risks involved for the purpose of carrying out the work, the conditions and duration of exposure, the state of health of the wearer, the workstation's characteristics, and practicable in controlling the risks. PPE has to be hygienic and for the sole use of the wearer, thus the guidance to reuse them may raise questions, unless they are addressed by having adequate measures that ensure the hygiene is not compromised where reuse is needed.[30] Such PPE should also be maintained and replaced.[31] The exposure to Covid-19 infections is directly work-related, and employers have the means to protect and implement control measures to reduce the chances of risks materialising. These circumstances directly oblige hospitals to ensure that PPE stockpiles are sufficient so that they are readily at hand when they are needed by the healthcare workers. The difficulty arises when there is a disparity between the actual supply and provision of PPE, and meeting compliance with the legal requirements.

Recent Public Health England[32] (PHE) guidance has emerged in response to the pandemic in advising hospitals on establishing a safe system of work through

[27] *Yorkshire Traction Company Limited v Walter Searby* [2003] EWCA Civ 1856; in *Daborn v Bath Tramways Ltd* [1946] 2 All E.R. 333, at 336, the driver of ambulance with left-hand drive was found not negligent when, in wartime, she turned to the right without giving a signal.

[28] *Watt v Hertfordshire* [1954] 2 All E.R. 368.

[29] Regulation 2(1)(a).

[30] For example the PHE Guidance noted that some PPE may be reused, subject to effective cleaning system.

[31] Regulations 5 and 7.

[32] PHE is tasked with national oversight and leadership on public health issues, and in this capacity support NHS, manage national public health service and support the public health workforce development, see also Herring (2016, p 54).

organisational means, ranging from suitable work processes, engineering controls, environment, and provision and use of both work equipment and PPE (single sessional use of particular PPE, reusable PPE) and decontamination procedures.[33] The guidance recognised the employers' legal obligation to protect workers from health and safety risks in controlling and limiting infection transmissions, including assessing risks associated with patient influx, and reduced staff numbers due to illness. This aspect corresponds with Regulation 5 in assessing the risks of injury and the purpose and adequacy of such gears where available. However, developing PHE guidance, in addressing PPE shortage highlighted "the compromise needed to optimise the supply of PPE in times of extreme shortage… protect stock levels from unnecessary use and support staff to use the right equipment."[34] Such modifications mean that PPE are used throughout the session unchanged between patients, "as long as it is safe to do so", which differ from the WHO guidance. Other modifications, such as lower grade face masks reflect a standard which is lower than the WHO recommendation. While reusing gloves should be avoided, some PPE such as face masks, gowns and eye protection are only liable to be changed when they are *visibly* contaminated or damaged. The implication is that such PPE would have lost the protective function, putting the healthcare workers at risk under the guise of protection.

Duty Owed to Patients

The direct correlation between staff engagement and patient experience demonstrates the close association between the quality of care patients received and the provision of treatment by healthcare workers.[35] The NHS, a government-funded healthcare service under which hospitals in the UK operate sets the standards for service provision and professionalism. In essence, it commits to provide high quality, safe and effective care, and recognises that a valued and supported workforce will translate to quality patient care.[36] The NHS Constitution, which outlines the basic principles and values of the NHS governing the relationships between healthcare workers, patients and the public generally, illuminates particular rights under employment laws, and NHS pledges to their staff, with the overarching priority of delivering patient centred care. Patients have the right to be treated professionally by qualified healthcare workers as part of a safe system of work in a clean and secure

[33] Several guidance were published advising hospitals of rapid changes to PPE use and disposal: Guidance: Introduction and organisational preparedness 21 May 2020 https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/introduction-and-organisational-preparedness; Guidance: COVID-19 personal protective equipment (PPE) 20 May 2020 https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe produced jointly by Department of Health and Social Care (DHSC), Public Health Wales (PHW), Public Health Agency (PHA) Northern Ireland, Health Protection Scotland (HPS), Public Health England and NHS England.

[34] Public Health England, Department of Health and Social Care and NHS England (2020).

[35] Guidance: Handbook to the NHS Constitution for England (2020).

[36] NHS, *The NHS Constitution for England* (2020).

environment, signalling the necessity of an appropriately equipped and maintained environment. The cyclical nature of patient care and duty to staff is clearly reflected, with explicit recognition that staff should be provided with the resources and support to deliver quality patient care and for healthcare workers to identify and eliminate risks to patients.

The failure to provide PPE for healthcare workers has significant relevance and broader implications to patient care. Healthcare workers with substandard or without PPE are exposed to infection risks, rendering them susceptible to absence from work for at least 14 days, resulting in workforce depletion. This is especially critical for healthcare workers functioning in high risk zones. Healthcare workers operating in other units would be asked to support the continuity of care for Covid-19 patients, thus creating a void in patient care in less critical areas. Frontline healthcare workers face immense pressure treating patients under crisis. While there is an expected level of stress[37] that corresponds with the nature of the work in providing care, transferring workers from other specialty units to assist their frontline colleagues may prove exacting, given that their training and competency for the job can vary. The rerouted human resources meant that patients in other units are inadvertently neglected due to reduced staff.

Another serious, adverse outcome is the risks of transmitting the infection to patients where healthcare workers are unaware that they have been infected; particularly in asymptomatic situations. PPE greatly reduce the risks of infection in the first place, for both the health and safety of the healthcare workers and patients. The strong correlation between the augmented risks of infection and PPE shortage creates a system where patients are harmed. The commitment to deliver quality patient care and a good working environment has, unfortunately, become questionable in this environment. While the NHS Constitution provides for avenues of complaints to line managers, the bureaucracy meant that staff will continue to face infection risks unless they refuse to treat patients.[38]

Recalibrating the Duty of Care?

Prior insights from previous pandemic and the lack of remedial measures to address the weaknesses identified in the healthcare system during national pandemic simulation exercises may raise valid concerns regarding errors of judgement that resulted in the inability to provide PPE in a timely manner. Public authorities hold and exercise discretionary powers within the constraints of complex decisions, social utility and organisational objectives. However, are we setting a standard too high for the NHS managers in procuring PPE, given the prevailing circumstances? Are there any exceptions to this duty in times of pandemic, where it can be reasonably anticipated that healthcare systems may become inundated, resulting in the necessity of working within a less than optimal environment? The following sections consider arguments

[37] See *Walker v Northumberland CC* [1995] 1 All ER 737.

[38] Bowcott (2020).

and counterarguments limiting hospitals' legal obligations towards healthcare workers.

The Exigencies of Covid-19

The characteristics of Covid-19 are essential in understanding the severity of the pandemic, its impact on the healthcare systems, and why particular focus on the legal obligations of hospitals towards healthcare staff becomes significant now and in the future. The morphology of Covid-19 has garnered international attention, with scientists investigating its biochemical components for preventive, containment and vaccine trials purposes. It was first reported in Wuhan, Hubei Province of China on 31 December 2019, with origins traced to the 1960s as common viruses that infect humans, particularly in respiratory functions.[39] The transmission methods and survival on various surfaces have been the subject of intense scrutiny with findings that the virus can be detected on surgical masks for up to seven days. Hospital working areas such as intensive care units, self-isolation wards, doorknobs and keyboards are found to carry high concentration of viruses. Viruses were present in the body for more than a week prior to visible symptoms with the highest virus load found in the early stages of infection, suggesting that asymptomatic individuals could be more infectious than symptomatic ones as sources of population transmissions.[40] These findings are crucially linked to the recommendations for use, reuse and disposal of PPE and its effect on healthcare workers who were infected. Around 10% of infections in England recorded between April and June 2020 were found in health and social care workers resulting from their direct interactions with patients in hospitals.[41] Spain, Italy, China and the USA have reported between 10% and 20% of infection cases from healthcare workers while treating infectious patients. This underscored the detrimental effects of PPE shortage on healthcare workers.[42]

The lack of PPE has cast the spotlight on augmented risks to healthcare workers. Such risks of harm are widely acknowledged.[43] Healthcare workers experienced psychological and moral distress, frustrations and anxiety in carrying out treatment decisions, fear of risking their health, and infecting their families and patients. They are similarly exposed to emotional harms from being prevented to voice their concerns on health and safety, or compelled to provide care under unsafe circumstances. The British Medical Association has repeatedly supported the position that healthcare workers should not continue working with substandard PPE or without basic PPE that could prevent them from avoidable harm.[44] However, this has not allayed the harmful consequences to healthcare workers.

[39] European Centre for Disease Prevention and Control (2020).
[40] Ibid.
[41] Wilson et al. (2020).
[42] WHO (2020).
[43] British Medical Association (2020), Carrington (2020), Smyth (2016).
[44] British Medical Association (n 43, p 7).

The force of the Covid-19 exigency poses an arguably persuasive factor in limiting employers' liability. While Covid-19 is frequently hailed as unprecedented, the nature of influenza pandemic is not completely unknown. History has revealed examples of pandemic that occurred across centuries with various degrees of severity.[45] Once the WHO declared Covid-19 as a pandemic, PPE became global focal points. Countries rushed to secure additional PPE, with demands far exceeding supply within an asymmetrical circulation of medical resources. Although the challenge of scarce resources is a common predicament affecting hospitals, simulation exercises (e.g.: Public Health England 2016) undertaken in some developed countries provide ample opportunities for advance preparatory measures. The experiences of frontline healthcare workers from other countries several months before the pandemic reached the UK would have constituted sufficient notice of the gravity of the situation.

Institutional Structures and Resourcing Constraints

Hospitals have grown in complexity through centuries. The extent to which institutional structures, devolved administrations and resourcing constraints provide justifications for their omission needs to be determined within their role as public authorities. The NHS structure is represented by a complex matrix of quasi-government, private entity with specific powers and responsibilities, thus affecting their liability to healthcare workers as employees, moving beyond the simplicity of hospital-doctor employment relationship. It has been said that "to describe the structure of the NHS is not an easy task…partly because it is a labyrinthine and partly because the NHS has been and still is undergoing enormous structural changes with bodies being created, merged and destroyed at an astonishing rate."[46] The NHS is funded from taxes, with allocations approved by Parliament, and expenditures controlled by clinical commissioning groups.[47] NHS managers work in a complex environment, from purely administrative to larger roles of system management and leadership with accountability to frontline healthcare workers, the Department of Health, private providers, and subject to public scrutiny.[48] NHS managers are expected to balance several competing rights, among others the public health, healthcare workers' rights and organisational constraints.[49] The creation of internal market supported by the Health and Social Care Act 2012 has been critiqued as one of the structural problems permeating NHS[50] which produced a considerably weakened responsive capability during pandemics. Continuous public sector changes, marketisation strategies

[45] Walsh (2020).
[46] Herring (n 32, p 52).
[47] Ibid, p 55.
[48] King's Fund (2020).
[49] The Code of Conduct for NHS Managers Directions 2002, Department of Health with powers derived from National Health Service Act 1977, National Health Service and Community Care Act 1990 implementing the Code of Conduct for NHS Managers.
[50] Herring (n 32, p 58).

and funding cuts have led to the government's reliance on private firms to provide services during public health emergencies.[51] Suggestions that PHE decisions were politically influenced have led to allegations that PPE guidelines were not necessarily led by public health science, as seen in the case of lowering PPE standards due to shortage, contrary to WHO recommendations.

Hospitals performed their functions within the wider framework of organisational complexities, decision-making hierarchies and limitations, and political willpower. They often have statutory responsibilities involving difficult and sensitive judgements to make.[52] They also inadvertently suffer from particular authority or financial barriers, which puts them in unenviable positions when faced with claims of negligence in equipping employees with PPE. The discretionary powers available for public authorities, other remedial options and consequences for public service delivery influence how standards are determined.[53] A finding of liability may result in obstructions with the exercise of discretionary powers guided by particular reasoning within the system for purposes of efficient and necessary governmental machinery.[54] The structural determinants illuminate the systemic failures that plagued these entities. As Christian Witting accurately observed[55]:

> "In some cases, decisions made at a high political level inevitably entail difficulty in meeting service targets or in under-servicing, and must be expected to result in failures in care. The failures in care that result are systemic in nature. Their acceptability is politically pre-determined and courts might have little authority to redress them."

Resource availability within public authorities remains a pressure point among competing sets of considerations.[56] It indicates the dilemma of meeting social needs for the effective functioning of society within a finite environment of resources. Public authorities traverse the boundaries of public and private law in judicial applications of the law of negligence, human rights and statutory powers.[57] This is reflected in the NHS context, which represents one of the most politically charged and publicly contentious issues of all times.[58] *Daborn* demonstrated that in cases of national emergency, the lack of available transportation resources, the inherent limitations of the ambulance and the need for continuity in emergency services precluded the defendant from further duties. While not a complete defence, public service liability is

[51] Lawrence et al. (2020).

[52] *Barrett v Enfield LBC* [2001] 2 A.C. 550.

[53] Ibid.

[54] Ibid at 107.

[55] Id, see Witting (2001).

[56] Examples include *East Suffolk Rivers Catchment Board v Kent* [1941] A.C. 74; *B v Camden LBC* [2001] P.I.Q.R. P143; Morris LJ in *Watt v Hertfordshire* [1954] 1 W.L.R. 835 alluded to resourcing issue, where had the station been larger with more resources there is a higher likelihood that the vehicle fitted with a jack would have become available for use.

[57] Witting (n 17, p 102).

[58] Lawrence, Garside, Pegg, Conn, Carrell and Davies (n 51).

closely connected to resource constraints, weighing against the finding of liability.[59] Cases have shown that although public body should not be treated any differently from commercial employers, financial constraints and rigidity in decision-making are relevant factors.[60] This signifies the balance between resource availability and cost and practicability of preventing workplace injury.

Duty in Times of Pandemic

The issue of how far the duty should go when it comes to omissions to provide PPE in a pandemic context is unresolved. Given the public health crisis precipitated by the pandemic, it is likely that hospitals would be 'forgiven' for their failure in fulfilling their legal obligations on the basis of emergency and their constraints as public authorities. However, hospitals are the linchpin in delivering frontline healthcare services and maintaining public health in an infectious disease setting. It is argued that hospitals should depart from an approach that expose healthcare workers to infection risks, harm public health and is inconsistent with the core NHS patient centred care principle.

The provision of PPE is fundamental to healthcare workers in carrying out their work. PPE protect healthcare workers, and in turn enable them to deliver crucial care especially in times of pandemic. It is not an infallible method, but without these PPE they are most likely to suffer from injury and harm from the risks of infection. The failure to provide PPE to healthcare workers is a failure to deliver care to patients at critical points. The size, capacity and resources available to hospitals are influential considerations; nevertheless, they are not determinative to the extent of justifying the omission to provide PPE. A comparison can be drawn to PPE provision during normal times and in times of emergency. In normal times, the impact, while it may be felt, may not be acute for patient delivery care because the limit has not been breached. However, in emergency times, the impact of the failure to provide PPE to healthcare workers is severe. The *Daborn* and *Watt v Hertfordshire* cases had established the importance of the end to be achieved in saving lives, consequently such emphasis can be inferred as recalibrating the obligations of essential services and balancing the rigidity and prescribed exclusion of liability. When the objectives are to save lives and ensure the continuity of vital healthcare delivery, it would appear contradictory to omit the provision of PPE that directly enable the treatment and care of patients. The lives of frontline healthcare workers *and* patients justified the provision of PPE. These arguments deviate from the standard argument of resource constraints, but they offer a strong reasoning why they should not be precluded.

Imposing the duty to provide PPE is therefore central in ensuring healthcare workers are protected from the risks of infection and to realise the aim of delivering patient-centred care to the public. Thus, this duty should be adjusted to the extent of meeting the requirement of basic provision of PPE and ensure the continuity of such

[59] *Watt v Hertfordshire CC* [1954] 1 W.L.R. 835; *Knight v Home Office* [1990] 3 All E.R. 237.

[60] *Walker v Northumberland CC* [1995] 1 All E.R. 737; *Hardaker v Newcastle HA* [2001] Lloyd's Rep. Med. 512 at [54].

PPE supply in spite of the pandemic. This argument may seem contentious because there are persuasive cases that will preclude the finding of liability in a situation where resources are scarce and that individuals are expected to endure the crisis. However, hospitals need to demonstrate that they have proper mechanisms in place to address shortages in prolonged crisis instead of relying on arguments of budgetary limitations and hierarchy in decision-making. These points need to be identified at each step along the way to determine if the standard of care has been reasonably met. While cases involving public authorities often lend weight to the exclusion of liabilities; they can be distinguished from the current situation in several ways. First, the shortage in question is remedied by the availability of vehicles for the continuity of services, despite not the usual vehicle (e.g.: left-hand drive in *Daborn*). The Covid-19 situation represents a context where healthcare workers have exhausted these basic supplies and faced the consequences of no PPE for the remaining clinical encounters. Second, Covid-19 is not a singular incident but an event that is urgent in nature and continues on a daily basis. The severity of the harm meant that without any protection they face a high likelihood of being infected. The lowered standards of PPE use and recommendation for reusing PPE are attempts at remedying the complete shortage. The argument is that *some* protection is better than *no* protection. Although hospitals are attempting to meet their obligations; PPE which are visibly damaged would cause harm under the guise of protection.

The persistent lack of funding to hospitals has contributed to an environment where PPE shortage is tolerated and accepted as standard (though not reasonable) practice. PPE guidelines that decrease the health and safety standard exemplifies resource consideration. It is difficult to comprehend, even at the basic level, for employers not to provide essential PPE for protection against known risks within standard public health measures. Covid-19 is an infectious disease, and the reasonable response is to provide PPE that eliminate or reduce the risks from exposure to such infections. While the purpose of the work is such that infections are incidental to the nature of the employment, PPE is an indispensable and cost-effective measure in minimising such risks. In spite of the difficulty in functioning within a resource-limited environment, PPE is not purely best practice, but fundamental medical practice. An implication flowing from these considerations is recalibrating the mutual obligations between hospitals and their employees, underpinned by effective healthcare delivery consistent with the NHS Constitution. A blanket approach to the finding of liability may be unsuitable, as not all hospitals are similarly equipped, though it remains incumbent on hospitals to fulfil their basic obligations without jeopardising the safety of healthcare workers. Parallels can be drawn to the established standards and practices relating to PPE for employees working with hazardous materials. PPE can be modified but only to the extent where they are capable of providing full protection to healthcare workers, and not lower than the recommended standards. PPE availability inculcates a sense of assurance that frontline healthcare workers are valued and appreciated, both by the public and their employers, and for the workers, the confidence in carrying out their roles in treating and caring for infectious patients.

System deficiency may be influential in determinations of liability, but it does not always prevail over what is reasonably expected from hospitals. Hospitals have the

moral duty to take care where their actions will affect those who might be affected by the failure to provide adequate and safe PPE: staff and patients. Such duty falls within the remit of NHS managers. As Covid-19 progresses, hospitals ought to have foreseen the impact of PPE on healthcare workers and patients; given the length of the pandemic, rather than a singular emergency. Not all finding of liability will automatically result in floodgates, trivial claims or become burdensome for public authorities.[61] Rather, it reflects the social and public expectations of what is fair and reasonable. The legal claims filed by healthcare workers for PPE shortage reflect societal expectations of what *ought* to be done in ensuring healthcare workers are provided with sufficient PPE. Departing from this standard would have stretched the limits of acceptable assumption of risks. The public, while accepting that Covid-19 is an unprecedented health threat to the population, will not be kind in their assessment of the measures to contain the pandemic, particularly in response to the dearth of vital medical resources in times of crisis. It becomes imperative to recognise their vulnerabilities and to keep healthcare workers safe.

Systemic failures may well be compelling, but it is unsatisfactory to then say, there is nothing hospitals could do. Reports have continuously demonstrated the correlation between the lack of PPE and higher risks of infection for healthcare workers compared to the public.[62] This naturally translates to poor patient care as they become sick. There is clear neglect in ensuring stockpiles of PPE in meeting the *basic* requirement of ensuring workers' health and safety. The lack of clear direction and protocols in management and leadership has contributed to the failure of establishing a safe system of work. What would a reasonable healthcare provider do? It is to provide adequate PPE when it is needed and to have processes in place to supplement the stockpile. The saving of lives is a continuous emergency, reflected by the number and severity of patients healthcare workers treat daily. The discretionary power should be exercised towards ensuring resources are allocated towards meeting the obligations of hospitals during pandemic, in preparing sufficient PPE for healthcare workers. For example, the procurement team of the NHS Trust is responsible for purchasing supplies and equipment for the hospital, where specific purchasing rules and budgetary limits apply. This translates to broader governmental responsibilities within the decision-making authority which subsequently influenced the overall level of pandemic preparedness. The long-term deficiency in preparedness for a potential infectious diseases outbreak, and the failure to remedy PPE availability through systematic and appropriate procurement arrangements for continuous supply have contributed towards hospitals' inability to replenish severely dwindled PPE stocks in a timely manner. These cumulative factors have resulted in the breaching of PPE limits to the detriment of healthcare workers.

The hesitance towards advance preparedness is remarkable, given the window period available to the UK with precedents from China and neighbouring European countries.[63] Hospitals, especially the well-resourced ones, with the hindsight of previous experiences in treating patients under the deluge of pandemic could have

[61] *Phelps v London Borough of Hillingdon* [2001] 2 A.C. 619.
[62] Parshley (2020).
[63] Hunter (2020), Mahase (2020a, b, c, d).

foreseen the need to install precautionary measures to safeguard the continuity of essential supplies and safe functioning of workplace for healthcare workers. Adopting such preparatory measures would have enabled a safer response strategy for critical patient care in anticipation of increased burden on the frontline staff, adjusted according to the size and scope of the hospitals' operations and resources. The next section offers practical recommendations in pre-empting PPE shortage.

Minding the PPE Preparedness Gap: Pre-empting Shortages, Processes and Recommendations

The failure of hospitals in providing healthcare workers with PPE has resulted in concerted and self-help measures in procuring PPE. The most common preparation is stockpiling essential PPE. This comes as a benefit of hindsight; nonetheless valuable in preparation for second or third waves of infections, and as crucial planning for future pandemics. For example, prior to the onset of infected cases in New York, some hospitals have acquired millions worth of PPE as early as February 2020 on the basis that "you can never have enough."[64] This foresight paid off, enabling healthcare workers to continue working while protected. An appreciation for improved procurement procedures in place, such as the role of supply chains in PPE procurement is integral in successful pandemic preparation. The public–private procurement chain has ensured that New Zealand has sufficient PPE for the healthcare workers and the population, with additional weekly supplies from local manufacturers.[65]

The shortage in the UK remains acute. Reports have emerged that care home workers were requested to continue caring for infectious patients without PPE in the event of extreme shortage.[66] Local councils are responsible for delivering healthcare services (e.g.: care homes and community mental health services) which falls outside the NHS supply chain scope. This means that they are most likely to lack PPE in times of national emergency. Jurisdictional divisions have, unfortunately hampered the effective cooperation for public health to the detriment of frontline healthcare workers and the public.[67] The systemic impediments in the NHS organisational structures might be difficult to overcome immediately, but the awareness of how PPE delivery is hampered by these institutional barriers can pave the way for alternative routes to remedy the situation.

Supply chain management and logistical issues are beyond the remit of employees personally, and those in charge of organisational operations should be responsible in fulfilling the obligations in ensuring that PPE are in stock and at hand when they are needed. This means having additional supplies for emergency purposes

[64] Ornstein (2020).

[65] Covid 19 coronavirus: Tonnes of PPE now in Auckland warehouse 9 Apr, 2020 https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12323807.

[66] Taylor (2020).

[67] See further Laurie and Hunter (2009).

while procurement for additional PPE is in progress to ensure continuity in supply for healthcare workers. Consequently, measures include revisiting internal procedures in assessing the individual levels of preparedness in hospitals, and preparing alternative plans in redirecting patients to hospitals with more capability to deal with infectious patients if the scale and capacity of the local hospitals do not permit the proper treatment and availability of care to the patients without risking staff safety. It is equally valuable to treat the pandemic as akin to disaster response with mass casualties as it enables the operation of protocols and processes for such emergencies occurring for a substantial period of time.

NHS managers must be aware of such developments, encompassing clinical and administrative appreciations of the effect global supply chain has on essential PPE procurement in planning and reducing the gap between stock depletion and arrivals. This entails building good, working relationships with relevant suppliers and producers. As resources are finite, having operational plans in advance at the institutional level would alleviate the burden of dealing with these issues during emergency when there are absolutely no PPE available. Infrastructural planning, reorganisation and improvisation are essential to remedy the weaknesses that prevented hospitals from fulfilling their obligation in providing a safe system of work and adequate plant and equipment for the purpose of caring for patients. It is not advocated that there should be a perfect system but a functioning system at a fundamental level that ensures that employees' health and safety are not compromised in times of pandemic, and that risks are controlled within reasonable limits.

Longer term measures include instituting improved communication among hospitals within proximate areas in breaking the disease transmission chains locally and regionally. This approach will facilitate local capabilities in minimising the disease spread, especially in under-resourced and rural areas healthcare services. Such regional networking approach has resulted in successful pandemic response among 15 hospitals in Lombardy, Italy in coping with patient surge.[68] The current decentralised decision-making approach in the NHS and the lack of effective communication policies in disaster management have led to critical resourcing issues.[69] Processes and procedures that allow a centralised, consistent response mechanism in national emergency are essential in ameliorating some of the difficulties in pandemic response and management. For example, an emergency "clearinghouse" that acts as a centre is helpful to identify areas with high needs for PPE so that immediate actions can be taken to distribute PPE to these critical areas.[70]

Increasing local production capacity and supply in times of crisis are central in ensuring uninterrupted supply from local sources and less reliance on external producers during PPE scarcity. Spain, for example has aimed to produce millions of masks and other essential PPE on a monthly basis to meet the needs of healthcare workers.[71] When the shortage was first reported, the local and national level

[68] Cavallo et al. (2020).
[69] Hunter (n 63).
[70] Livingston et al. (2020).
[71] Sappal (2020).

communities in the UK were very supportive towards the healthcare workers in creating homemade PPE and supplying them to healthcare workers. Although this is admirable, these supplies may not meet the adequate level of protection to ensure that infection risks are minimised. One way of overcoming the obstacle is to create a streamlined effort between local governments, charitable organisations and local volunteer groups to ensure they meet the safety requirements. This approach would help local and independent manufacturers to achieve local production capacity for the benefit of the communities within a shorter amount of time, and less dependent on outsourced procurement agencies or importation. It is also a stop-gap measure while awaiting incoming PPE supplies from centralised distribution centres. This move is advantageous to the local communities, as local hospitals can continue to treat patients without being forced to turn them away due to PPE shortage.

Reusing PPE is an option to ease the pressures of PPE shortage. However, the direction to reuse PPE can only be safely implemented where there are protocols for cleaning, disinfecting and storing reusable PPE and limited to PPE that are capable of being reused safely. Such essential protocols must include appropriate laundry capacity, whether in hospitals or outsourced to commercial entities.[72] Other options include repurposing suitable equipment into PPE that are safe to use for eye and face shields, such as gas masks or sports eye protectors.

Employees should not be put in an already vulnerable position without the minimum support and infrastructure to carry out their work. The pressing problem of insufficient PPE represents the tip of the iceberg. It reveals a fragile structure in the healthcare system, with the implications of Covid-19 felt long after it has come and gone. The level of provision of care for the population in times of pandemic is closely connected to the health workers' risks and safety. The analyses bring to light the importance of implementing sustainable measures for population health. More innovative ideas are needed for producing and replenishing important resources to pre-empt the domino effect arising from a lack of resources in times of pandemic.[73] Hospitals are obliged to be more forthcoming in providing clarity with regards to the supply of resources, and to accommodate the possible reluctance of healthcare workers in working in unsafe circumstances. Frontline workers who are being prevented from airing their concerns on the severe lack of adequate PPE is detrimental to their functions in providing care. It could not be said to have met the aims of patient safety when staff are not equipped, valued, empowered or supported in carrying out their work.

Conclusion

This paper has highlighted how the pandemic has affected the legal obligations of hospitals to healthcare workers in the provision of PPE. Hospitals as employers have obligations towards healthcare workers, which include providing a safe

[72] Livingston, Desai, and Berkwits (n 70).

[73] Ibid; Cavallo, Donoho and Forman (n 68).

working environment and adequate equipment. The nature and extent of their duty are affected by their role as public authorities and in times of emergency. Hospitals usually do not incur liability on the basis that they have service provisions that are influenced by resource constraints, limits in decision-making authority and bureaucracy. *Daborn* and *Watt v Hertfordshire* exemplify the types of constraints public authorities face in providing social services, which weighed against the finding of liability. There are persuasive arguments from both perspectives in determining the extent of liability hospitals may incur in their failure to provide PPE in a timely manner. Yet legal actions against governments and hospitals have opened up the possibility to reconsider the scope of liability, and the fulfilment of the expected standard under pandemic circumstances. The analyses show NHS managers would be in breach of duty for provision of PPE on the basis that the purpose of their activity is relevant in determining if an employer has breached a duty of care to an employee. While the negligence may be arguably excused during crises, the failure to meet the basic resourcing needs of frontline healthcare workers has breached the minimum standard and ethical imperatives in protecting them from life-threatening harm while they continue to treat an increased influx of patients. Additionally, it has highlighted broader issues that plagued PPE procurement readiness preceding the pandemic. The analyses have indicated the extent to which the meeting of legal obligations in a pandemic can be undermined by external, underlying pressures arising from austerity policies introduced throughout the years, and an increasingly privatisation-oriented procurement practice, consequently weakening the public sector capacity in competently meeting public health threats.

It is hard to dismiss the consistent pleas from frontline healthcare workers. Such pleas strengthened the recognition of obligations to provide PPE. Maintaining public health and safety in times of pandemic is of utmost importance; however the public can only be properly cared for where healthcare workers are able to continue working in a relatively safe environment in the midst of a pandemic. The fundamental need for PPE and the health and safety of healthcare workers must be prioritised. While this paper has gestured towards the obligations in providing PPE, the analyses have shed light on the inextricable implications of sound governance in meeting health priorities during a pandemic. It has canvassed a broader profile of underlying issues and proposed recommendations, emphasising the need for cohesive measures to address PPE shortage and alleviate the risks to frontline healthcare workers. The state may not be able to salvage the deaths and distress caused to frontline healthcare workers, but it can act more substantively to protect them and to restore public trust that the healthcare system would not collapse in times of pandemic. It has been argued here that hospitals ought to maintain their obligations to provide PPE to healthcare workers, because a failure to adequately protect them is also a failure to protect public health.

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