Under pressure

An ethnography of the choreography of pressure ulcer care practices in the NHS

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I, Elisabeth Maria Lidwina Roding, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

The National Health Service (NHS) has been under pressure for years, with this rising further during the Covid-19 pandemic. In 2022-2023 nurses protested against the pressures they were experiencing and how this endangered patient safety in the largest nursing strikes in NHS history. In my study I focus on one particular aspect of patient safety; pressure ulcers. Pressure ulcers are injuries caused by continuous pressure on skin. In an ethnography of an NHS hospital and the medical device industry, I trace how the pressure on patients' skin is connected to the pressure on the NHS.

I find that wherever pressure builds up there are attempts to move it to other sites, people, things, and times. I show different ways that mess can result from this dynamic and different attempts to control it. The first paper demonstrates how nurses try to clean up messy ambiguities in the policy shift away from a 'culture of blame' to a 'culture of learning' in the NHS by advocating for different responsibilities, values, and interests in different contexts. The second paper unpacks how a multidisciplinary team investigating serious pressure ulcers in the hospital uses retrospective speculation and anticipation to control uncertainty in prevention. The third paper counters the technological solutionist promise that technologies relieve pressure on skin and staff by showing how pressure is not removed but moved and the politics of this redistribution.

Drawing these three papers together, I conceptualise pressure ulcer care in the NHS as a 'choreography' to emphasise interdependencies between a variety of human and other-than-human actors, their routines and adaptations to specific situations, and the constant work that goes into organising and planning these practices. I reflect on the limitations of the pressure metaphor that links pressure ulcer prevention with contemporary debates about the state of the NHS.

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Chapter 1: To the bone

It is a warm summer day. Ward K[1] in Hospital B has one desk fan, which is moved back and forth between the place where the nurse in charge is working on a computer, and where the staff meetings are taking place. The nurses and healthcare assistants on Ward K are walking the corridors at a speed that is hard to keep up with. They are short staffed today, as they are many days. When I ask nurse Virika if I may shadow her today she hesitates and says that it is fine only if I do not slow her down. She explains that her twelve and a half hours shift yesterday was extended by another two and a half hours and she does not want to have to stay late again.

Virika is a nurse on Ward K and well-loved by her colleagues. They often ask her for help and at times she is a sort of mother-figure to them, giving hugs and cuddles. She does her work precisely, and wants to finish what she starts, often making it hard for her to leave on time. Virika is paired up with healthcare assistant Carolyn today and they are taking care of the same patients. Carolyn is experienced. She knows the routine and is not easily surprised by patients' questions and remarks anymore. She has a repertoire of responses ready. She does her job carefully. Virika says she is pleased to be working with Carolyn, because she will be able to work quite independently and efficiently. This is essential because they have a lot on their plate today.

Virika starts her shift by working on the computer trolley to register the medications she is giving patients. She is talking to herself every now and then and complains to me that there is no internet connection at the moment, making it impossible to finish some of her work. Carolyn is asking the patients what they would like for breakfast and preparing it for them. She wears a portable fan around her neck. She wipes away a pearl of sweat from her forehead as patient Jamal asks her for help searching for his coat. I have met Jamal several times and he has always been exceptionally friendly and calm. He speaks in his usual gentle, soft voice today, but seems restless and worried about his coat. Carolyn says she will need to come back to help him later, because they are short staffed today. She has more patients to help with breakfast than she normally would. Pointing to the clock on the wall she says she is behind on time already.

When Virika reaches Jamal in her medication round, he asks her if she knows about the coat he has lost. It had money in its pocket. She says she will ask his daughter about it later, but that she has eight more patients to get sorted first. I notice that Jamal's mattress system is showing a flashing red light on its control panel.

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[1] The names used in this thesis are pseudonyms to protect interlocutors' anonymity, including Ward K and Hospital B.

At this point in my fieldwork, I had spent two and a half years listening to and shadowing a team of nurses specialised in wound care called tissue viability nurses. They told me many times how dangerous it can be for the skin when a specialist mattress is misbehaving, putting the patient at risk of developing pressure ulcers, which is a serious injury on the skin caused by prolonged pressure on it. A mattress alarm might indicate it is deflating, meaning the patient might be lying on the hard metal bedframe underneath it, exposing the skin to high pressures. They linked the development of several horrible pressure ulcers over the past few months to mattress pump alarms having been ignored by nursing staff on the wards. They were some of the deepest, most angry looking wounds I had ever seen. These experiences shaped me and my response in Ward K with Virika, Carolyn, and Jamal that day.

While I am hesitant to disrupt Virika's busy day, I ask her about the alarm on the mattress pump. She seems a little frustrated with my interruption and says everything looks normal. We quickly check if the mattress is plugged in correctly and have a look at it together. She pushes on different parts of the mattress to get a sense of how firm it is and whether it bounces back well. *It is normal!* she concludes and moves on to give the neighbouring patient his medication. She leaves me wondering why the mattress system's alarm is going off. Is anything wrong with it that Virika and I have not noticed? Should further action be taken? I worry Jamal might be at risk of developing a pressure ulcer.

After she has given all patients their breakfast, I ask Carolyn about the mattress system's alarm and she says Jamal is going home today anyway so that it is fine. I am still worried, because lying on the bedframe even for a couple of hours can cause serious pressure ulcers in patients at high risk. Shortly after my chat with Carolyn, I see Jamal has been helped into a chair next to his bed by one of the therapies assistants, Olivia. I feel a wave of relief.

Standing in the corridor, Carolyn and Virika speak briefly about Bruce, a patient in the next room who keeps trying to climb out of bed, making him at risk of falling. They decide they need to keep a close eye on him today. Olivia asks Carolyn to stay with Jamal who is feeling nauseous. Carolyn goes to Jamal and helps him to the toilet and put on a clean shirt. Virika goes to the next room to look after Bruce and make sure he does not fall out of bed.

Later that day I find Virika working on a computer at the nurses' station in ward K's corridor. She is interrupted by healthcare assistant Layla who works in a room with patients who need constant supervision, so she cannot leave them alone. She tells Virika that one of her patients wants a doctor urgently and Virika says she will be right there and jokingly says she will act as the doctor. Not a moment later Carolyn interrupts Virika's work on the computer to ask her for a dressing for the tissue viability nurse. Virika gets the dressing and then picks up the phone that is ringing.

At this point I realise why the mattress system is left with the alarm going off. Virika is juggling many tasks at the same time and is constantly interrupted by people and things adding new tasks to her long list. Beyond checking if the mattress system is working and therefore not a direct threat to Jamal's skin, she does not prioritise finding out why its light is flashing and making sure it stops. In the context of being responsible for more patients than normal due to the staff shortages that day and one of her patients being at constant risk of climbing out of bed and falling, she needs to make a judgement call about the most immediate risks and prioritise accordingly. Falls are an immediate risk where serious harm can be inflicted in a matter of seconds, and pressure ulcers have a different temporality. Pressure on the skin will not be life threatening in a matter of seconds or minutes but it takes longer and there is often a delay between the pressure on the skin and the pressure ulcer appearing or being in a serious stage. Or Virika may have simply forgotten about the mattress system alarm.

Virika talks to me about the pressures she is under during her break on another day. We sit in the small team room taking our facemasks off to have lunch when she asks me: *Where is the time*? She explains that patients are so vulnerable and things take time, but things that are due at a particular time never happen when they need to. She is constantly interrupted and encountering other things that need doing. In the beginning she could not cope and cried. The theory is that she and her colleagues are like machines. *But we are human. What is expected of us is not reality!* Virika is getting upset and says it all comes down to the shortage of staff. She wants to share moments with her patients, share laughter, hold their hand, but they are so short staffed. She says:

> *The reality of life is not happening here. Everybody is on the go. Here patients get oxygen when their oxygen levels are too low, but really what they need is for one of the nursing staff members to sit with them and encourage them to breathe deeply. But this requires us to sit with them for 2-3 minutes, 5-6 times per day. How? How? Sometimes I do wonder how this will happen. How?! (…) You want to do it, but you can't!*

She starts to cry. We are quiet for a little while.

> *I can't treat it as a job. It's more than a job. It takes a lot of different aspects of emotions. (…) We still struggle. If we don't, who is going to take care of all these people? It's not just a job; we are not machines. You can't give a patient breakfast for dinner; things need to happen with care and attention.*

Virika and Carolyn show us how alarming the situation is on ward K. They point to the pressures they are under, for instance, the regular staffing shortages, unreliable and failing equipment like the mattress system's alarm going off, and increasingly sick patients in need of more intense care. Which other pressures are Ward K and the Hospital B under? How is the pressure affecting staff's ability to take care of patients? How is it affecting patient safety? Where should responsibility for patient safety lie in such a pressured field? And what role do technologies like special mattresses play in the care under pressure?

Introduction

In this section I will introduce the topic of my doctoral study, before discussing how I approached the study, situating it in debates and linking it to theories.

Sore points and pressure ulcers

Pressure ulcers, sometimes referred to as decubitus ulcers, pressure sores, pressure injuries, or bed sores, are considered a preventable harm and are used as an indicator of quality of care in the NHS (NHS Improvement 2018, 2). Pressure ulcer prevention[2] is not a new aim in healthcare, but since 2011 it has become more formalised in the NHS with campaigns promoting patient safety by preventing four common 'patient harms', one of which is pressure ulcers (Fletcher, Jacklin, Adderly 2021, 15). Those four harms became a formal focus of inspections and monitoring quality of care through counting their incidence at each Trust[3]. High numbers can mean financial penalisation, making pressure ulcers a highly politicised injury (ibid., 16).

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[2] The concepts of pressure ulcer prevention, pressure ulcer treatment, pressure ulcer management, and pressure ulcer care overlap in meaning. Pressure ulcer treatment can mean using creams, dressings, and technologies like pressure redistributing mattresses to promote healing of a pressure ulcer, but these practices also prevent the pressure ulcer from deteriorating and new pressure ulcers from developing. Pressure ulcer care and prevention, however, encompass more than pressure ulcer treatment and management. In my use of the concepts, the former include a wider array of practices that aim towards improvement of pressure ulcer outcomes, such as staff trainings on pressure ulcer prevention, and multidisciplinary meetings to investigate pressure ulcers. Pressure ulcer treatment and management, by contrast, refer to practices more directly related to specific pressure ulcers on individual patients.

[3] NHS providers are organised into Trusts (NHS, n.d.[A]; NHS Data Model and Dictionary, n.d.), for example, several local hospitals can form a Trust together. NHS Trusts that reach certain standards can become Foundation Trusts (NHS Great Ormond Street Hospital for Children n.d.). While they work by the NHS principles and remain part of the NHS, they are managed locally, giving them more freedom to choose how they work (NHS Sandwell and West Birmingham n.d.). Foundation Trusts have a board and an audit committee

Pressure ulcers have been described as a 'silent epidemic' (Voegeli et al. 2007). The injury causes people severe pain (McGinnis et al. 2014), which patients have described as "“stabbing,” “jumping,” “niggling,” “red hot poker,” “carpet burn,” “tender,” and “raw”" (Spilsbury et al. 2007, 500). Caring for pressure ulcers often requires patients to be bed-bound for long periods of time, adding to their suffering. These and other care and prevention methods can cause people with pressure ulcers to become socially isolated (Roussou 2023; Benbow 2009). This can be exacerbated by malodour that may be coming from the wound.

In addition to the suffering pressure ulcers cause patients, they are frequently framed as a big pressure on the NHS in terms of their financial burden, the hours of NHS care that are required, and the number of patients who acquire them (Guest, Fuller, and Vowden 2020). In 2017-2018, 202,000 adults in the United Kingdom had a pressure ulcer (ibid., 4) and £571.98 million was spent on managing pressure ulcers in the NHS per year (ibid., 11).

While these numbers appear clear cut, pressure ulcers are complicated to count. They are, for instance, divided into six different categories, but there is room for interpretation in the grading process. Pressure ulcer development is linearly categorised into four grades, ranging from a red mark on the skin, to a blister, to broken skin exposing underlying tissue (European Pressure Ulcer Advisory Panel 2009, 8-9). The latter can get very deep, down to the bone. There are two more, separate categories. Firstly, unstageable pressure ulcers are open wounds but cannot be categorised, because the wound bed is not completely visible. Secondly, suspected deep tissue injuries, which are dark areas of intact skin or unbroken blisters that are suspected to indicate deep damage but the full depth is not visible (NHS Improvement Pressure ulcer categorisation group 2019). Pressure ulcers further vary in how quickly they develop. Sometimes it takes days, but at other times they grow to be serious within a few hours (NICE 2015, 6). The delay between pressure on the skin and the appearance of pressure damage can make it difficult to determine how the damage was done: whether it is a 'hospital acquired pressure ulcer' or a 'community acquired pressure ulcer'. Nevertheless, they are categorised as chronic wounds because their healing process is different from other wounds, and can take years (Frykberg and Banks 2015). It can be an unpredictable process with the wounds moving back and forth between categories of healing and potentially remaining in one category for a long time.

The unpredictable healing process, the space for interpretation in categorisation, and the politicised nature of pressure ulcers mean it is difficult to count and compare pressure ulcer incidences between Trusts (see also, Fletcher, Jacklin, Adderly 2021, 17). Since there is a lot on the

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which are responsible for governance and quality of care, amongst other things. When I write about Trusts in this dissertation, I mean both NHS Trusts and NHS Foundation Trusts.

line for Trusts and staff, such as potential financial fines for high incidence or Coroner's Court for staff, this lack of clarity raises questions of what effect this system of counting incidence has on staff. In the context of most pressure ulcers being considered preventable, measuring incidence is, in a way, measuring mistakes. The difficulty of prevention is that its success, the absence of pressure ulcers, cannot be measured.

Another complication with determining who or what is responsible for pressure ulcers is that there are many underlying conditions that potentially can contribute to their development. Pressure ulcers are primarily caused by prolonged pressure on the skin, but they occur most frequently in people who are already ill, frail, or whose mobility is impaired. Vascular disease, obesity, incontinence, and dehydration all increase a person's risk of developing pressure ulcers (NHS n.d.^{B}). Pressure ulcers also tend to develop later in life. The average age of patients with a pressure ulcer in 2017-2018 was just above 76 (Guest, Fuller, and Vowden 2020, 5). This variety of conditions contributing to pressure ulcers developing or deteriorating raises questions about what is in and out of the control of the people held responsible for it and how much power they had to prevent it. Was it avoidable or not and who was responsible?

Nurses and midwives carry responsibility for pressure ulcer prevention in hospital (Fletcher, Jacklin, Adderly 2021, 15), but the prevention practices are shared amongst a variety of professionals, patients, and carers. Pressure ulcer prevention and care require both routine practices to be done consistently as well as acute responses when the first signs of an ulcer appear. According to the ASSKING model used in the NHS, pressure ulcer prevention requires patients to be sufficiently hydrated and have a diet that keeps their skin healthy (McCoulough 2020). Patients need to change position regularly and be helped to do so if their mobility is impaired. Their skin needs to be assessed regularly and their risk of developing a pressure ulcer needs to be assessed so that appropriate measures can be put into place. Based on the risk assessment, the right surface for the patient to be lying and sitting on must be selected and put in place. There are a variety of options, such as foam mattresses and pressure redistributing air mattresses. Patients need to be asked if they are uncomfortable or in pain and they and their carers should be given information about the risks and how to prevent them. Finally, to help incontinent patients' skin be less susceptible to developing pressure ulcers, good management of their incontinence is key. These practices are integrated into nurses' and healthcare assistants' ward rounds and routines in acute care settings (hospitals) and community care (care homes, home care), and many people who live at home do this independently or with carers. Physiotherapists, occupational therapists, manual handling specialists, dieticians, staff in equipment libraries, and people in many other roles may also be involved in these practices.

Tissue viability nurses specialise in wound care and skin health, and raise awareness amongst nursing as well as other staff about pressure ulcer prevention. They work in both hospital settings and community care. Alongside their duties of examining and advising on care plans for severe pressure ulcers, they train nursing staff in the rest of the Trust about pressure ulcers and their prevention. Tissue viability nurses have developed many creative ways to educate staff about the risk of pressure ulcers, for instance, by using dolls named with acronyms for prevention strategies, e.g. Purple Patty (Purple Patty 2019). Other strategies include members of staff being a dedicated 'pressure hero' (Pressure heroes n.d.) and the Red Dot campaign (Stop The Pressure n.d.), which uses stickers on the body in areas at risk of developing pressure ulcers to draw attention to them. In doing this work, tissue viability nurses involve more people in a wide variety of roles.

Peaking pressures in the NHS

Ward K is not alone in experiencing the difficulties described above, which themselves are commonly referred to as 'pressures'. The NHS has had various challenges and problems since its inception in 1948 (Morgan 2022, 6). The staffing shortages that Ward K is suffering from, for instance, are widespread. On the 31st of March 2023 there was a nursing staff vacancy rate of 9.9% across NHS England, meaning there were 40,096 vacancies at that time (NHS Digital 2023). But there is also a shortage of doctors and other health care professionals (House of Commons and Social Care Committee 2022, 4; The King's Fund 2019). These staffing problems are resulting in a shortages of beds in hospitals, contributing to long waiting times in emergency departments, which has been connected to increased numbers of patient deaths (Jones et al. 2022).

The 2008 global economic crisis kickstarted an increase in the pressures on the NHS, which were further exacerbated by the Covid-19 pandemic during the course of this ethnography. After the start of the economic crisis, government budget cuts put greater financial pressures on the NHS (Ham 2023, 5). Leading up to the pandemic, there was already a growing shortage of beds (Ewbank et al. 2021), but the pandemic worsened things dramatically (The King's Fund 2019). It laid bare the consequences of the budget cuts, such as limited ICU provision (Ham 2023, 5). Although, some of the Covid-related pressures have had positive consequences, such as improved efficiency due to the push to arrange remote care via technologies (Horton et al. 2021), many of the existing problems were intensified and have become more visible. There is a serious back log of elective surgeries that were postponed and waiting lists for treatment in hospitals have reached 6.5 million (House of Commons and Social Care Committee 2022, 3).

The pandemic weighed heavily on NHS staff. At the beginning of the pandemic, many NHS members of staff were working in tough conditions, caring for patients with an illness surrounded by much uncertainty. Little was known about this new disease, other than that it was dangerous and highly infectious. Many members of staff had to work more shifts and longer hours, filling in for sick colleagues. They had to wear more personal protective equipment than they were used to, and many were redeployed into jobs and wards they did not know much about. Some wards moved back and forth between doing their usual work, and being a dedicated Covid-ward. Staff often had to switch rapidly between the two several times in the span of two years.

During the height of the pandemic there was a lot of gratitude towards NHS staff in the United Kingdom. For example, residents were clapping in public to express their thanks (Ruck 2020) and painting rainbows with the words 'Thank you NHS' under them on walls and posters, like the mural my friend and I walked by in London (see figure 1). But the pandemic lasted longer than anyone had dared to think it might. When the pandemic finally calmed down and numbers decreased the increased appreciation and high value given to NHS staff did not continue. Yet, NHS staff were still dealing with the pandemic as well as a growing back log of work that had to be done, while the majority of the United Kingdom sought to get back to normal. It is unsurprising that in 2021, 40.5% of registered nurses and midwives and 38% of nursing and healthcare assistants indicated they were feeling burnt out (NHS staff survey 2022). On top of that, in the context of inflation and rising prices for basic necessities, nurses' pay had not increased proportionally for many years (Royal College of Nursing n.d.^{A}).

Pressures in different parts of the service combine and interact to produce 'compound pressures'. The definition of these is broad and they often extend beyond the health care system itself. It includes pressures such as 'additional health care needs in winter,' 'extreme heat events' and now, 'epidemics or pandemics' (Department of Health and Social Care 2023) as well as 'increases in the cost of living, disease levels post-COVID and the operational pressures that the NHS and social care face' (ibid.). In a news article Chief Executive Ian Trenholm explained how the pressures interact: "People are stuck - stuck in hospital because there isn't the social care support in place for them to leave, stuck in emergency departments waiting for a hospital bed to get the treatment they need and stuck waiting for ambulances that don't arrive because those same ambulances are stuck outside hospitals waiting to transfer patients" (Triggle 2022). The pressures are creating feedback loops in which people get stuck and pressures are exacerbated. Long waiting times, for instance, mean illnesses develop and are more serious when the patient receives treatment (House of Commons and Social Care Committee 2022, 3). Another example of interacting pressures is staff sickness because of work stress, increasing the pressure on their colleagues. In August 2021, for instance, two million

Figure 1: Photograph of a large painting covering two roll-up shopfronts celebrating 'NHS keyworkers' on the left and, on the right, saying 'Thank you' on a rainbow, with two stuffed teddy bears holding a banner underneath it stating 'You'll never walk alone'. The words are surrounded by rainbows, and stars, and more stuffed animal figures. It was taken in Londen in June 2022 by my friend Silvia during a walk we took together.

sickness days were taken by NHS staff, of which over 560,000 days were taken due to mental health problems such as anxiety (paraphrased from ibid.).

The widespread narrative of the NHS being ‘under pressure’ (see, for example, Murray 2023; British Medical Association 2023; Rocks 2022) raises questions about what exactly this means. What does the metaphor of ‘pressure’ highlight and what does it make invisible? Many other metaphors and symbolic comparisons are used to make sense of problems, skin, and wounds, such as ‘skeleton staff’ and ‘to the bone’. I have collected them throughout my ethnography, discussed them with interlocutors, and used them in the following thesis as ways of understanding how people experience and describe the dynamics of the NHS, the skin, and pressure ulcer care.

These and other questions about the pressure on the NHS are important to examine because there is no comprehensive, sustainable solution in sight. While efforts are being made to improve NHS staffing levels (Haves 2021), for instance, there have been problems with numbers of staff since the NHS was founded (Ham 2023, 21). There is not a lot of faith that the governments’ current efforts will form a sustainable solution (House of Commons and Social Care Committee 2022, 3) nor that it will happen soon (Holmes 2022).

Weepy wounds and leaky systems

In this dissertation I study pressure ulcer care and prevention practices in NHS Hospital B. I show how the pressures on the NHS exist on a practical level, and I trace ways in which they interact with the pressures on patients’ skin. In doing so, I reflect on the general narrative of the ‘pressure on the NHS’ and the use of ‘pressure’ as both a metaphor and a tangible force that acts on individual bodies.

Pressure ulcer prevention and care are widely distributed practices, encompassing mattresses, dressings, patients and their carers, red dot stickers, and members of staff in a variety of roles. While the wide distribution might make it seem more stable, it also makes it vulnerable to pressures on each of the actors, disrupting the routines in which pressure ulcer prevention is integrated. Nursing staff, for instance, argue there is often not enough time to help patients reposition as frequently as needed to relieve the pressure off their skin on days they are short of staff. The mattress system’s alarm on Ward K further illustrates how pressure on staff and pressure on skin are connected; the failing equipment and staffing shortage meant that Jamal was potentially at increased risk of developing a pressure ulcer due to prolonged pressure on his skin. These leaky[4] pressures create a negative loop, because pressure ulcers prolong patients' stay in hospitals and increase their care needs often referred to as 'nurse time' (see, for example, Bennett, Dealey, Posnett 2004). As a result, increasing needs and costs put growing pressure on financial and staff resources. What does this mean for pressure ulcer prevention practices?

Nurses are placed centre stage in pressure ulcer care, carrying the main responsibility for their prevention, but they are making it increasingly clear that they cannot keep their patients safe in the pressured work environment. In 2022 the biggest nursing strike in the history of the NHS started. Nurses demanded fairer wages, and better working conditions. They stood in picket lines carrying signs reading; 'Understaffed. Undervalued. Underpaid.' (Express and Star 2023) and 'A nurse for life, not just for Covid' (Royal College of Nursing n.d.[B]). The flyers going around in summer 2022 calling nurses to vote to strike stated: 'For each additional patient per nurse, the risk of death increases by 7%.' And: 'Only 25% of shifts have the planned number of nurses on them.' They argue that they are being placed in an impossible position, in which they are being held responsible for (the failure of) such things as pressure ulcer prevention. While the pressure on nurses is increasing in terms of care and prevention, the conditions enabling them to do so seem to be breaking down. This raises questions about accountability. Should nurses be held accountable if pressure ulcer prevention is not completely in their control? Additionally, what are the necessary conditions for staff to be held responsible for an avoidable pressure ulcer? When is it considered out of their control? Was it then unavoidable or does this mean the responsibility lays elsewhere? How do the different pressures in the NHS leak into each other and interact, and how they are connected to patients' weepy wounds[5]?

Situating my approach

In this section I will specify the questions I ask, my aims, and go into some of the theories I draw on, situating the study in several key debates. While this dissertation is paper-style and I discuss literature specific to each of the three papers in the dedicated chapters, in the current section I consider the main themes relevant to how I approached the entire study.

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[4] I am not the first to refer to the NHS and its pressures as leaky, see, for example, the British Medical Association's article 'An NHS under pressure' in which they refer to it as a 'leaky bucket' (British Medical Association 2023).

[5] This is a common phrase amongst wound care nurses, referring to wounds that produce excessive wound fluid, many of which are pressure ulcers.

Research questions and aims

The majority of studies on pressure ulcer prevention and care are much alike. They are mostly conducted in places of formal care, such as long-term care facilities and acute care settings, including nursing homes (see, for example, Regan, Byers, and Mayrovitz 1995), rehabilitation facilities (see, for example, Pieper et al. 1997), hospitals (see, for example, Vanderwee, Defloor, and Beeckman 2011), and intensive care units (see, for example, Strand and Lindgren 2010). They predominantly use quantitative or mixed data collection methods, such as surveys and retrospective analysis of care data (see, for example, Wipke-Tevis et al. 2004). Studies about nursing assistants and patients are not uncommon, but many studies specifically about pressure ulcer prevention concentrate on nurses (see, for example, Miyazaki 2010). There is also research on what happens at the cell level in pressure ulcers (see, for example, Gefen et al. 2022).

Many studies focus on improvement of (quality of) care by reducing pressure ulcer incidence and costs simultaneously. They focus, for example, on testing nurses' knowledge of, and adherence to, pressure ulcer prevention programmes (see, for example, Sinclair et al. 2004; Strand and Lindgren 2010; Qaddumi and Khawaldeh 2014). These studies compare nurses' knowledge or practices before and after the implementation of a prevention or training programme. Another common study topic is the evaluation of effectiveness of new tools, technologies, techniques, and materials designed to prevent pressure ulcers (see, for instance, McInnes et al. 2015; Vanderwee, Defloor, Beeckman 2011; Yip et al. 2009). Finally, financial costs of pressure ulcers and pressure ulcer prevention are a major theme in the literature (see, for example, Catania et al. 2007; Lyder 2002; Xakellis et al. 1998).

While some studies focus on the overall financial costs of pressure ulcers to the health service, studies about pressure ulcers generally do not move beyond the pressure on the body. A broader perspective on pressure ulcer prevention and care is needed that is able to relate this to the pressures on the system. In contrast to many other projects, this study is not aimed at direct improvement of pressure ulcer care by arguing how to work more effectively or prevent more pressure ulcers. Instead, I aim to identify and examine practices, how they are organised, the assumptions and norms embedded within them, and make links between the narratives about pressure on the NHS and pressure ulcer care and prevention. I aim to provide insight into and awareness of these in order to show what they highlight and what they make (im)possible. In this way, I interfere in them (Mol 2013, 381) to make visible practices that are not often discussed and what is invisible to or taken for granted by nurses themselves.

While I write this dissertation I hope my interlocutors will recognise their practices and reflections in my writing. However, there are many possible versions I could write. Rather than aiming for objectivity or neutrality, I made choices. How I compose the narrative, which stories I tell, as well as the study itself[6] are an intervention in NHS pressure ulcer care as much as accounts of it.[7]

Pressure ulcer care and prevention are often thought of as a ‘nursing issue’. Nurses, are therefore working hard to raise awareness of the distribution of the practices outside their profession; asking other professionals, patients, and politicians to share responsibility. They do so in trainings they give to other staff, by educating patients and their carers on prevention, and now recently by going on strike to ask politicians to support them so that they can keep their patients safe. Through this study I have become their ally and aim to support their work for several reasons and in several ways. Firstly, by writing about pressure ulcer prevention and care I draw attention to it, supporting the nurses’ effort to raise awareness. Secondly, I unpack how pressure ulcer care as a set of practices is distributed far beyond nursing, across many different people and things and technologies. Thirdly, by conducting the study, and writing this dissertation, I hope to contribute to the effort of making nursing staff’s work more visible. This supports the theorisation of nursing on its own terms, investigating their everyday practices (see, also ‘New Nursing Studies’ in Ceci, Pols, Purkis 2017) and the broader feminist move to make feminised work visible (see Latimer 2014 for more on gender dynamics of nursing). With these three aims, I build on Puig de la Bellacasa’s (2011) feminist Science and Technology Studies approach. Her concept of ‘matters of care’ refers to something that can be done, as well as a way to construct knowledge (paraphrased ibid., 100) by being committed to paying attention to what is usually forgotten and taken-for-granted while essential to survive. Inspired by this, I study mundane care practices and make them visible.

There is a double gender standard when it comes to pressure ulcer care. Historically, nurses’ work has been predominantly done by women, and taken-for-granted. As feminised work, it is often considered domestic and private (Mol, Moser, and Pols 2010, 8). It is consequently socially and financially undervalued compared to other, masculinised work, such as doctors’ work (see, for example, Cowan 2020; and Latimer and Ozga 2010 for a critical reflection on (de)feminisation of nursing). At the same time, the UK’s Department of Health, its policies, and ongoing campaigns are placing greater emphasis on the importance of pressure ulcer prevention (Fletcher, Jacklin, Adderly 2021, 15) and its role as an indicator of quality of care and patient safety, so there is a lot on the line for the NHS, Trusts, and individual nurses in relation to pressure ulcer care. On the one hand, nurses’ work is undervalued, yet, on the other hand, the responsibility for pressure ulcer prevention is largely put on them (ibid.). The wound becomes politicised by building a system in which, if the injury

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[6] See Chapter 2 on how I did research, for more on how doing ethnography meant being in the field, rather than observing from outside or afar.

[7] See Del Percio and Cowan 2023 for more on writing as politics. And see Law 2004 for more on research as political intervention and ‘ontological politics’.

develops, it extends far beyond the individual patient's skin, potentially affecting the nurses, and ultimately the outcome of NHS Trust's quality audits.

My study reverses the mode of critique prominent in nursing studies (Ceci, Pols, Purkis 2017, 55; Moser 2010). Rather than asking what is going wrong, I will approach my research with the question: What can we learn from this field? In this dissertation I tell the story of the pressures on the NHS, the pressures on NHS staff, and the pressures on patients' skin. I show the complexities in these pressures, the ways in which they interact, and unpack assumptions made in the narrative told about them. By asking what are the assumptions here, I create space and openings for new imaginaries, such as: What if we enacted them differently? If we give formal responsibility not only to nurses but also to others, then what? I trace the various ways in which pressures on skin and in the NHS are linked to answer the following question and sub-questions:

> How does pressure take shape in pressure ulcer prevention and care practices in the NHS and with what effects?

I treat this sensitising question as a provocation. It is a place to start my inquiry with the help of several sub-questions:

- In which ways are the pressure on patients' skin and the pressures on the wider NHS connected practically?
- What does the metaphor of pressure highlight in the context of the NHS and which doors does it open and close (to solutions)?
- How are pressure ulcer prevention and care practices coordinated and shared between the different human and other-than-human actors involved?
- Which mechanisms have been developed at hospital as well as policy level to navigate uncertainties in pressure ulcer development and prevention?

In the next sections I will describe my approach to these questions, focussing on three themes that run through the rest of the dissertation: 'care practices', 'pressure and metaphors', and 'the boundaries of the NHS', and I will situate the study in ongoing debates about these topics.

Care practices

As I have already mentioned, pressure ulcers are used as an indicator of quality of care and patient safety in the NHS. This means that based on pressure ulcer incidence numbers, conclusions are drawn about how well NHS staff are doing their jobs at an organisational level. This is the overarching idea, but, in practice, individual nurses can be held responsible for pressure ulcer prevention, even though they have varying workloads, and need to take clinical decisions based on specificities of cases and situations. These are two different ways of thinking about care and prevention that point to an age-old tension in the social sciences. It asks whether to make sense of things at a macro, structural, or societal level, which effectively denies the role of individual characteristics and differences, or at the individual level in which individual choices and capacities are key, but which can ignore structural constraints. This structure-agency debate (see, for example, Williams 2003) is about asking whether people are intentional individuals that can make rational choices and have the power to shape their lives and, as a consequence, carry responsibility for it, or whether people's lives and the actions they may take are shaped by the systems they live in.

While theoretically, alternatives to the structure-agency divide have been developed, every day debates often still lean on the logic implicitly. This includes the narrative about the NHS being under pressure and the nurses being prevented from keeping their patients safe. So how do I relate to it? My work borrows from practice theory. This is an attempt to circumvent the structure-agency debate (Spaargaren, Lamers, and Weenink 2016, 6) by focussing in detail on what people do in specific circumstances instead of people's experiences, individuality, or conceptualising society's forces (Reckwitz 2002). It studies particular, concrete, material practices and things and is based on 'flat ontology' (Schatzki 2016) that resists reproducing hierarchies of influence. However, while I borrow from practice theory, I do not stick to all its rules. I study care practices, but also the way people make sense of them and the pressures they say they are under. I examine where responsibility is placed, and which assumptions are made, and hence combine a practice focus with a more traditional set of anthropological questions.

While it is often said that 'time heals all wounds,' pressure ulcers show that time is not necessarily a friend. The NHS's definition of pressure ulcers as '…injuries to the skin and underlying tissue, primarily caused by prolonged pressure on the skin' (NHS n.d.[B]) presents time as the enemy. Preventing ulcers is a matter of working with and against time to stop the breaking and dying of skin. It requires a careful, vigilant, attending to time, but paradoxically also costs time. This vigilance has been built into routines integral to care in wards and across the hospital (Latimer 2000, 40; Zerubavel 1979). Building on feminist empirical care studies, this study proposes to study care as an interactive routine of daily practices (Mol 2006, 12, 13; see also, Ceci, Pols, Purkis 2017, 57). It involves experimenting and tinkering with knowledge, and techniques to continually adjust changing variables in order to achieve what is collectively held as a good (Mol 2006, 75; Mol, Moser and Pols 2010). The checking, adjusting, and tinkering all serve the purpose of reaching an arrangement that produces valued realities (Winance 2010, 111) and desired futures (Lemos Dekker 2020). But if tinkering requires time, space, and calmness, what happens when this is all under pressure? The nurses on strike argue that they are no longer able to keep their patients safe (Cullen 2022). The pressures they are under, such as their working conditions and the staff shortages, are disabling them to do their jobs and by implication be able to care through constant adjustment.

Pressure as metaphor

I use the idea of metaphorical thinking as one way to study these pressures. Metaphors are often used to makes sense of abstract concepts such as stress, making them more tangible by linking two completely different ideas to imply their similarities (Lakoff and Johnson 1999). Brown (2003, 29) points to the creative opportunities this presents, but warns that by highlighting some aspects, others are placed in the shadows (ibid., 26). Using the same metaphors repeatedly risks these aspects becoming forgotten and potentially other productive ways to make sense of an abstract concept getting lost. The choice of metaphor, or ‘narrative device’ (Roitman 2003), opens up certain narratives while precluding others.

Thinking with metaphors is a common ethnographic device as well as a practice studied ethnographically. Most ethnographies are small-scale, in-depth studies that draw connections to bigger questions and abstract concepts. Metaphors can be used creatively to link the two in particular ways to make sense of complex interactions. By doing so with the concept of pressure, I take inspiration from other ethnographers in whose work metaphors plays a central role. Martin (1994), for instance, analysed the metaphor of ‘flexibility’ in her study of people with AIDS’s, lay people’s, and scientists’ understanding of the immune system drawing parallels between their ideas about immune systems and organisations’ emphasis on ‘flexibility’. While Martin’s study took the idea of ‘flexibility’ from the field, Tsing’s (2005) applied the metaphor of ‘friction’ to make sense of her fieldwork observations. In her book about global connections in the destruction of the rainforests in Indonesia she uses the metaphor to show how things move between and against each other. Some anthropologists, therefore, use metaphors as a theoretical device in order to describe things that are apparently different, while others foreground metaphors that are commonly used by interlocutors in order to show the way in which associations and connections are made in particular contexts. I do both. The pressure metaphor is not my invention. I study it both as an ethnographic object, as well as use it in extended ways to make sense of pressure ulcer care.

The concept of pressure is used to think with in many different contexts and ways. In physics, for instance, it is used to express a physical force on an object. It can be measured in Pascal or Newton and calculated with force and surface area. If you keep the force constant and increase the area the pressure decreases. The law of conservation of energy applies, meaning that pressure is a form of energy that can move or transform into other forms of energy, but cannot disappear. In physics' conceptualisation of pressure, it has different effects on objects with different properties; gas, for instance, is compressible, while liquids are not. Aspects of these ideas about pressure are appropriated and applied to understand complex interactions in other contexts. In psychology the hydraulic pressure model is commonly used to describe stress. Pressures from everyday life build up and might erupt if they become too much and there is not a sufficient safety valve. In this narrative an eruption can take a variety of shapes, such as, burnout, shell shock, PTSD, or even psychosomatic conditions such as skin problems.

The pressure metaphor is increasingly used to describe the problems the NHS is facing. The Royal College of Nursing, for instance, published a list of '10 Unsustainable pressures on the health and care system in England' (2021), ranging from NHS bed occupancy, to nurses' sickness absence, to hospital waiting times, and Covid-19 infection rates. The British Medical Association keeps an overview called 'An NHS under pressure' (British Medical Association 2023) up to date on their website. It lists statistics about, staffing shortages, backlogs, quality of buildings and IT, and hospital beds shortage, amongst others. The phrase is also widely used in the media. The BBC, for instance, published "NHS: 'The phone rings all day – the pressure on us is huge'" about the increasing workload of general practitioners because of Covid-19 infections, an ageing population, and delays in hospital discharges blocking beds (Hughes and Wright 2023). And the Guardian wrote "NHS in England under more 'extreme pressure' than at height of pandemic" (Ferguson 2023) about the long ambulance response time and how the NHS is relying heavily on international staff recruitment to resolve staffing shortages.

In this way, the concept of pressure is widely evoked and normalised to describe difficulties and problems in the NHS, but it is being used to invoke a variety of things. The wide range of problems linked to it, creates vagueness around what the problems are, where they originate, and who is responsible. Covid-19 infections, for instance, are regularly mentioned as a pressure. But this can refer to such things as an increase in patient numbers, an increase in complexity of care needed, or extra demands on infection prevention. They can also be a pressure in terms of staff being on sick leave because they have Covid-19, or in terms of psychological pressure linked to concern with becoming infected or spreading the virus to others. The list can go on, but it illustrates how multifaceted many of the so-called pressures on the NHS are.

In addition to conveying problems, the metaphor also implies particular ways to solve them. The way to solve pressures is to relieve them, or redistribute them, as if they are coming from outside and can be simply removed. Many of the problems referred to as pressures are interlinked rather than singular. The concept of pressure and how it is being used to describe the NHS as ‘under pressure’ needs to be unpicked further.

In this study, I examine the reasoning of the NHS being said to be under pressure, as well as using the idea myself to make sense of pressure ulcer care. I write about pressure as both practical and metaphorical. The former is material and visible. One physical thing exerts force on another physical thing, for example, a bike tire that pops when pumped up too far. In the context of my project an example of practical pressure is the pressure on patients’ skin that can result in a pressure ulcer. By metaphorical or intangible pressure I mean instances when the practical concept of pressure is applied to express an experience of something else, such as time pressure experienced by a nurse when the ward they work on is short staffed that day and they need to squeeze more work into fewer hours. In calling it ‘metaphorical’, I do not mean the experience or effects of these forces are not real. I mean that the application of the ideas associated with the concept shine a particular light on it, emphasising some of what is going on and making others invisible. Explaining or conceptualising an experience, event, or phenomenon with a metaphor like pressure is a particular way of making sense of it and shapes pathways to potential solutions, for instance ways of relieving pressure. I engage with questions, such as, what does this mean when we think about pressure as a metaphor used to describe the difficulties the NHS is having? What does the pressure metaphor highlight and place in the shadows? Which ways of making sense does it ignore? And which solutions does it open up for and exclude? I will come back to some of these questions in the concluding chapter.

Locating the field across the NHS’s permeable boundaries

The NHS was set up after the Second World War in 1948. Its purpose continues to be to ‘provide universal, comprehensive and free health care’ (Gorsky 2008, 2) and has been the main provider in the UK ever since. The NHS is mostly funded by general taxation and has grown to become a national symbol and a matter of national pride for many (Cowan 2020). Gorsky (2008) argues the NHS is a social construct, symbolising collectivism, the human need for survival, and solidarity (2). Over the years, elements of marketisation were introduced and around the end of the twentieth century the government allowed private health care providers to integrate in the NHS. This created a structure in which the NHS could buy private services (Pushkar 2019, 243), extending the boundaries of the NHS. But with the NHS remaining a symbol of national pride for many, there is extensive protesting and activism around its privatisation (Cowan 2020).

Exploring pressure ulcer care shows that the boundary between the public NHS and private medical companies is not clear-cut; often they are merged together. The NHS and the commercial sector are integrated intimately. For example, the medical device industry is actively involved in pressure ulcer care and prevention in the NHS. It not only sells products to the NHS, but also trials them in the NHS, provides trainings on how to use them to NHS staff, and provides materials on pressure ulcer prevention and care more generally. Many people working in the medical device industry used to work in the NHS or still do. The NHS depends on medical device companies, but the companies depend on the NHS and it being under pressure as a way to make profit. They have grown together and inseparable.

So what do I write about when I write about the NHS? How do I approach it? Although I initially thought about the NHS as a simple, bounded object, throughout my study this conceptualisation changed to become an object with permeable boundaries; absorbing technologies, people, industry services, and much more, and sometimes spitting them out again. Aware that the NHS is not an entity with clearly demarcated boundaries, I use the NHS as a heuristic device, but remain sensitive to its symbiotic relationships with sectors that are often thought to fall outside it.

Similar to how the NHS is deceptively ungraspable, pressure, and pressure ulcer prevention can be too. Pressure ulcer care is rendered invisible in all sorts of ways. A low pressure ulcer incidence does not indicate a lack of clinical work necessary to treat them, but the amount of clinical work necessary to prevent them. The desired result, however, is invisible. The effort, care practices, and heavy workload do not become visible in indicators. It does not get counted. Consequences of prevention efforts become visible only once they fail. This contributes to the taken-for-grantedness of pressure ulcer prevention beyond the nursing profession, which is a second type of invisibility in the study. During the Covid-19 pandemic there was a surge in media discussing pressure ulcers, for example, under the face masks of hospital staff, and the ICU work of proning and turn teams (Feenstra 2020; Weeks 2020). However, usually pressure ulcers are not a major matter of concern or topic for media attention. In her analysis of mafia and mafiacraft, Puccio-Den (2019) shows that with invisible and abstract concepts there is a risk of misunderstandings what they are and their meaning. This is similar to what happens with pressures and the NHS. Rather than try and define them, I draw on Borgstrom, Cohn, and Driessen's (2020) strategies to study the invisible. I follow the concepts by following up when interlocutors mention them and juxtaposing (Vogel 2021) ambiguities in their conceptualisations, narratives, and practices. I ask questions about how the invisible is made present, how it is imagined, and when it is hidden.

In the three papers that follow, I show three ways in which there is mess (see Law 2004 for more on research engaging with mess) in the moving of pressure (how it is lumpy and uneven) and three attempts at controlling this. The first paper unpacks several ambiguities in the policy shift away from a 'culture of blame' to a 'culture of learning' in the NHS (Department of Health 2000; Francis 2013; Berwick 2013). In the context of pressure ulcer prevention, I show how nurses in managerial roles and tissue viability nurses try to clean up the ambiguities by advocating for different responsibilities, values, and interests in different contexts. The second paper is about the uncertainty in prevention. It temporally unpacks how a multidisciplinary team investigating pressure ulcers that developed in hospital use retrospective speculation and anticipation to control uncertainty. The third paper is about the technological solutionist attempt to address the pressure on staff and patients' skin by adopting technologies that promise to relieve some of it. I show how in practice the pressure is not removed but moved, and this shifting to other places and actors is lumpy creating new areas of intensity and burden. These three papers show the variety of components and activities in pressure ulcer care and a need for focus on the interaction, coordination, and communication between the various actors involved. In the final section I will re-visit these general research themes, and link the three papers by conceptualising pressure ulcer care as a choreography in which pressure is constantly being moved and redistributed. Framing it as a choreography emphasises the interdependency between the variety of human and other-than-human actors connected in the wide network, their routines and adaptations to specific situations, and the work that goes into organising and planning these practices and care arrangements. These characteristics help me reframe the dominant ways of thinking and working in pressure ulcer care. I use them and a reflection on the metaphor of 'pressure' in the NHS to develop recommendations for practice and policy.

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Chapter 2: Triple pressure: How I did research

In this chapter I reflect on how I studied pressure ulcer care in the NHS. I use data extensively to convey my methods and explain the choices I made, which I am aware is unusual for a chapter focused on research methodology. However, ethnography is an iterative process of reflection, in which there is no clear distinction between methods of data collection and data itself.

The complexities various intersecting pressures can create in pressure ulcer care became particularly clear to me during one of the days I shadowed Yunus who works as a healthcare assistant on Hospital B's Ward K. I met him several times before during previous days on which I hung out on Ward K. I had shadowed him for a couple of hours before and we had chatted about the pressures he experienced in his work and outside of it. The day I am writing about here was not typical; emotions in Ward K nursing staff and healthcare assistants, including Yunus, were running particularly high, including for me. As I am writing about this I feel a heavy responsibility to protect Ward K's staff; I hope my story about that day will be read with empathy towards them and the hard conditions they work in. Although this field excerpt and others are about individuals, they are not about blame or responsibility. I am using them to show that the system that constantly has to deal with too many patients creates interpersonal friction, fractures and tensions from an institutional level, rather than individual guilt.

I attend the nurses' huddle in the small medication room, it is warm, there are no seats, and one of the medication fridges' alarms releases a high noise throughout the entire meeting. After discussing the patients, the nurses and ward manager talk about how to improve the situation in the day shift that is chronically understaffed. Several nurses express their frustrations with the working conditions and how they feel they are not being listened to. The atmosphere is tense. Everyone leaves to go back to their patients and computers.

After a short chat with some of the nurses and Yunus in the team break room I join Yunus in the high dependency bay and sit with him for the second part of the afternoon and early evening. It is a room with four beds with patients who need to be constantly supervised; for example, because they may be at risk of falling or aggressive towards their neighbouring patients. A healthcare assistant needs to be in this room at all times so when they need something they have to ask a colleague to get it. Equally, when they leave, they need to make sure a colleague healthcare assistant or nurse remains present. When I go to join Yunus, I find him sitting in a chair working on his computer trolley in the middle of the room. I talk to two patients about my study and they consent to me observing. Yunus asks me not to interact with the other two patients, because one is sleeping and often violent when woken. The other patient is not able to communicate verbally and he is finally calm after a restless couple of hours.

I find a chair and sit alongside Yunus as he asks me: ‘If I ask you a question, would you answer honestly?’ I confirm that of course I would. He then asks me what the nurses in the break room said about him after he left the room. I feel I start to blush, being put in an awkward, uncomfortable position with my loyalty being tested. The pressure on Ward K nursing staff has created divides of distrust between colleagues. Yunus places me in between them and I do not want to be a part of or contribute to these politics. I honestly do not remember if they said anything about him at all and tell him so. He does not seem convinced and he later asks his colleague healthcare assistant who was also in the break room at the time. I am relieved when she confirms that nothing was said about him after he left.

After providing some patient care, Yunus sits back down and works on his computer. He tells me that all his colleagues think I am a spy, spying on them. He says that he told them the NHS does not even have money to spend on staff, let alone hire someone to spy. While I knew that some Ward K staff members are suspicious of me and do not trust me yet, I am quite shocked by the strong way he phrases it. The topic of pressure ulcers is political and loaded, because their incidence numbers are used as an indicator of quality of care and patient safety, and a lot of emphasis has been put on their prevention in recent years. I respond that of course it is a bit strange for me to be hanging around the ward and that they might not be sure what I am doing here or what I am writing down. Most of them are unfamiliar with the type of research I am doing. So, I tell Yunus, it is only natural they are cautious and suspicious and that they talk about this to each other.

He then goes on to take the basic observations he does several times a day, for example, patients’ heart rate and blood pressure. He skips the sleeping and potentially violent patient, because, he explains, he wants to prevent triggering them to become violent. He explains that this morning it was quite difficult and he could not do any observations even though he normally does them every 2 hours. He describes how one of the patients was restless and walked out and stood at the nurses’ station for a while. Yunus had to somehow keep watching him there while also keeping an eye on the other three patients in the room. Because of all of this the nurse in charge was upset at him. At this time an occupational or physio therapist came in and told him to help the patient back into the room. Yunus said he cannot force the patient. When the patient was back in the room a while later, Yunus asked the nurse in charge to provide a member of staff to keep an eye on the restless patient one-on-one, so that he could take care of the other patients. The nurse in charge refused and he felt ridiculed by her.

A little while later, the nurse in charge comes into the room to give one of the patients their medications. She asks me if I heard the shouting before and tells me that a patient had six visitors at the same time today - four adults and two children - and that this is not allowed. She tried to explain the policy to them, and that they can visit two family members at the time and then switch. The family members became quite angry and the ward manager had to get involved. But this only incensed them further, and they started swearing and shouting in the corridors at her and that a healthcare assistant colleague came to help.

I take a break and leave Ward K for a little bit. I go to say hi to the tissue viability nurses in their office, and eat some of my food in the hospital restaurant. The tension on Ward K were getting to me and I felt I really needed this break.

After I get back, Yunus and I both sit down by his computer in the middle of the high bay again and we talk about what happened a few weeks ago when a patient had suddenly accused him of having hit them. There were family members in the room who all saw it did not happen. Yunus explains the other staff members, however, were not supportive of him; and did not investigate the situation. If they had, they would have seen that the patient had no marks or anything else you would normally see after having been hit. The nurse in charge only collected Yunus' and the patients' statement and asked them questions.

A little while later, two patients have visitors. One of the family members talks to Yunus and me about how bad staff and working conditions are in Hospital B. She says it is short staffed, the facilities are awful, and she ends up doing a lot for other patients in this room when visiting her family member.

One of the patients tries to climb out of bed because he needs to go to the toilet. Yunus tells him that he has a catheter so he can just let it go and stay in bed. A little later a visiting family member helps the same patient to brush their teeth and asks Yunus to help the patient use the commode. Yunus is hesitant, because his shift is almost over and there is no colleague available to help him do it. She says she can help, but Yunus says he wants to wait for the nightshift to do it, explaining there will be two staff members on duty then. The patient tries to climb out of bed again, looking uncomfortable. Yunus gets the commode from the bathroom and helps the patient on and off it on his own.

The systemic pressures such as ongoing staff shortages pestering Ward K, were putting intangible pressures on staff. This resulted in fragmentation of the nursing staff team, and anxiety spreading like a contagious disease. They were making me and my study vulnerable too sometimes, for example, through suspicion directly towards me. Yunus' day illustrates how routine care practices, such as repositioning a patient to relieve their skin, can easily get postponed.

I conducted fieldwork in multiple settings and ways, Ward K being one of them. Each was shaped by different pressures. It was a complex and, at times, messy field to study. The mess and people's engagement with it became the object of study. I drew on Law's (2004) analysis of how social science aims to 'know' the messy world it studies. He argues researchers organise the messy world artificially through their methods and writing. Attempting to know the messy world requires new and diverse ways of engaging with it, new methods, such as embodied or emotional forms of knowing (ibid., 2-3). In this chapter, I explain my structured and various approaches to attempting to get to know the messy pressures in pressure ulcer care in the NHS. How did I navigate these pressures? Which methods did I use for data collection? How did they allow to capture these pressures and what did they exclude? These are the questions I will discuss next.

Setting up, getting stuck, patching up

I first started considering pressure ulcer care as a potential research topic when I watched a Dutch documentary-novel series called 'Stuk', which has several fitting English translations, such as 'broken', 'piece', and 'part'. It told the stories of the people working and staying in the rehabilitation centre Heliomare on the Dutch coast. The voice-over read out information about each of these persons' lives in a style resembling a novel. One of the people it followed was wound care consultant nurse Monique. A good part of Monique's job was to deal with wounds as if they were mysteries to be solved, with her as a detective. I became fascinated with the temporality of pressure ulcers. They are always threatening patients whose mobility is impaired, meaning prevention is an ongoing effort. But once a pressure ulcer appears, it can get serious very quickly and become chronic. I was familiar with these types of wounds because of the stories my mother used to tell me about her work as an occupational therapist in various nursing homes. She enabled elderly residents to maintain as much of their abilities as possible by organising access to devices such as wheelchairs and beds, and teaching them how to use them. These devices helped residents, but could also put them at risk of developing pressure ulcers. She told me that often when one of the residents had an acute health problem for which they needed to be admitted to hospital, they often developed pressure ulcers. It made me wonder why and what happened in hospitals.

I discussed the idea of studying pressure ulcer care in hospitals with my potential supervisors and we realised there were multiple interesting angles from which the topic could be approached, so we wrote a successful application for funding at the Wellcome Trust. Inspired by other ethnographic work in healthcare environments, such as Livingston's (2012) hospital ethnography of a cancer ward in Botswana, Mol's work on the logic of care (2006), and her earlier work on the making of atherosclerosis as a disease through a variety of techniques and materials (2002), I started my ethnography in autumn 2019.

First, I set up an X account (then called Twitter) about my project to reach out to people working in the area of pressure ulcer care. This lead to video calls with people working in community care, and others working in the industry which sells materials and devices for pressure ulcers and their prevention. In parallel, I approached two tissue viability teams in two different hospitals in the hope to establish a hospital to host my project. I immediately ran into the problem of how much time pressure they were under. Their responsiveness was limited by how little time they had to spend on emails and, understandably, my study not being a priority. After presenting my research plan at a meeting at my university, someone approached me saying she used to work at a hospital and would be happy to put me in touch with a former colleague from quality governance. I reached out to chat with them, and they put me in touch with the tissue viability team lead, who was enthusiastic about my study and happy to host it in Hospital B.

Hospital B was particularly interesting for the study because it had been having problems with their pressure ulcer incidence and was developing a variety of strategies to tackle the problem. Recently, for example, members of staff had started having regular meetings to investigate pressure ulcers and learn how to prevent them better in the future. This extra focus on pressure ulcer care and prevention meant staff knew about the topic and its importance. Additionally, it was a large hospital, which meant there were enough patients with pressure ulcers for me to routinely shadow tissue viability nurses' taking care of them. With staff and patients moving in and out of the hospital, community, and industry, I treated Hospital B as a hub with connections and exchanges with other fields in which pressure ulcer prevention and management are practiced.

I started attending weekly meetings at which a multidisciplinary hospital team investigated pressure ulcers and made plans to prevent them in the future. When the Covid-19 pandemic hit the United Kingdom early 2020, I continued this preliminary work online (for more on the impact Covid-19 had on my project, see Appendix 1). I used the information I collected and the questions it raised to fine-tune my research plan. However, how does one go about planning a study in such uncertain times? I decided to wait and see how long the restrictions would last, hoping to still be able to do fieldwork once they eased. At the same time, I wrote a plan in which I approached my selection of research methods (interviews, shadowing hospital staff, observing team meetings, and attending conferences and study days) as building blocks to be used when the changing circumstances would allow. I presented my plan in July 2020 in an exam called an ‘upgrade’ at the London School of Hygiene and Tropical medicine.

The next step was to acquire formal access to Hospital B (I reflect on this process further in the section below on ethics). As time went on, the pandemic continued and got worse. My interlocutors were more overstretched than ever before. For me this practically meant they were, for instance, hard to reach when I needed to arrange access to the field. As the pandemic and restrictions continued, I got more and more stuck geographically, but I also got stuck in bureaucracy concurrently. I knew in advance that obtaining ethical permission to do research in the NHS was going to be hard. I was warned it could take months. The pandemic, however, exacerbated that problem. The process of submitting, amending, and obtaining final approval for both the NHS’s and the London School of Hygiene and Tropical Medicine’s formal ethics applications took from July to January. Just before the final approval, I started the process of setting up the study with the Research and Development committee of the hospital. Communication was already difficult and delayed with everything being done online, but then a high peak in the second wave of Covid came rolling in. In January 2021 the Research and Development team sent me an email: ‘With the current peak in the COVID admissions, we have suspended all (…) meetings until further notice. This includes study set-ups.’ The fieldwork was put on hold and I did not know how long this was going to last.

I discussed alternative plans with my supervisors; different fieldsites, different hospitals, community care, fieldwork in the Netherlands. None of these, however, would be free from the problems facing my fieldwork in London. Furthermore, I had already done so much preliminary work in Hospital B by this time that abandoning it did not seem ethical or feasible. Instead, I decided to focus on what I could do, such as online fieldwork at webinars, study days, and conferences. Additionally, during the preliminary work I learned that industry plays a much bigger role in pressure ulcer prevention and care than I anticipated. I added an arm to my initial plan.

While continuing to navigate the bureaucratic hurdles of setting up the study in Hospital B and staying in regular touch with the tissue viability team lead, I set up fieldwork in the medical device industry. To stay up to date about events and developments I signed up to various newsletters, including the United Kingdom’s Tissue Viability Society, the European Pressure Ulcer Advisory Panel, and the European Wound Management Association. I attended several of their events. Furthermore, I approached companies that are based in or with an office in the United Kingdom, which sell medical equipment for pressure ulcer care and prevention, such as dressings, creams, mattresses, and cushions. I sent them messages about my study, asking for a chat. I used the contact information on their websites, and approached individual employees over X. Many did not respond, but some did, with whom I set up interviews. All sixteen semi-structured interviews took place online, some interlocutors connected me to one of their colleagues to interview them as well. Most interviews were one-off, lasting about an hour. I transcribed or summarised them shortly after. In the interviews I asked about their products and work. Most of the interlocutors were nurses who used to work in the NHS and moved to industry to work in sales or as clinical advisors. I also interviewed members of industry staff whom I encountered in Hospital B training hospital staff on how to use their products. The interviews with industry staff are not quoted as much in the dissertation as the ones I conducted in hospital. Instead, they fed into many questions I raise throughout the dissertation, for example, concerning the boundaries of the NHS and the promises the industry makes about its products.[8]

While conducting the fieldwork in industry, I continued attending the weekly virtual pressure ulcer investigation and prevention meetings in Hospital B. I signed a non-disclosure agreement to last until data collection started. At the end of summer 2021, I got the green light from the hospital's Research and Development committee. I presented my plans at one of the meetings, asking attendees to participate. Shortly after, due to unforeseen personal circumstances, I had to take an interruption of studies from October to December.

Finally, in January 2022 I started my fieldwork in person at the hospital. Over the next nine months I focussed on the fieldwork, compressing the work I had initially planned to take twelve months in this shorter time frame. Having done extensive preliminary work, and attended the weekly pressure ulcer prevention meetings in advance helped make this compressed fieldwork possible. I was already familiar with quite a few members of staff who knew about my study and were on board.

During this period I spent two or three days a week in Hospital B, mostly based in the tissue viability nurses' team. They take care of and advise ward staff how to take care of severe pressure ulcers and other wounds. I shadowed them during their weekly team meetings, and other events. Most of their time was taken up with patient visits, which I shadowed whenever possible. Additionally, I conducted twenty-seven semi-structured interviews with staff involved in pressure ulcer prevention and care in a variety of roles, including tissue viability nurses, physiotherapists, quality improvement managers, recruitment managers, nurses, procurement managers, directors, ward managers, and matrons. I got in touch with them through snowball sampling, which means I was often asking people if they knew anyone else I could talk to about a certain topic. Sometimes interlocutors mentioned someone during an interview, which led me to ask if they felt comfortable if I would contact them about my study. These interviews took place where the interlocutor preferred, such as, in their office, the hospital restaurant, or a bench outside. I conducted several interviews

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[8] See paper 3 which will discuss technological solutionism, and (re)moving pressure.

online, depending on the interlocutor's preference, and whether we could both make it to Hospital B on the same day. The interviews lasted about an hour on average.

Finally, I conducted participant observation on one of Hospital B's wards, which I call Ward K. I had visited patients with the tissue viability team there several times and its ward manager had presented several pressure ulcer investigations. Ward K was experiencing various high pressures. I hung out at Ward K for a day, during which I had high expectations of shadowing members of staff. This did not work out. Instead, the nursing staff was so busy they did not even have time for me to tell them about my study. I was unsure what to do and felt discouraged. I then could not go into Ward K for a while, because I got sick myself. After reflecting on this experience with my supervisors and colleagues, I went back to Ward K several weeks later and hung out in the corridors and team room, having informal chats with members of staff. After a while, nurses and healthcare assistants approached me to tell me stories of the pressure they were under and to invite me to shadow them. Every day started with a nurses' handover, during which I was given a minute to present my study and hand out information sheets to the staff. The nursing staff changed with every shift so there were always members of staff who had not been introduced to my study yet. Although they did not have time to sit down and do a full interview with me, we had chats in the staff room which helped me understand some of the things I observed them do. In hindsight, I wish I had planned more time to settle into Ward K, get to know the staff, and give them sufficient time to get to know me.

Finally, I organised a workshop for the tissue viability team in June 2021, six months into fieldwork with a couple of more months to go.[9] All six of us sat down around a small round table in one of the hospital's office spaces. I covered the table with juices, water, and snacks to share. I presented what I had been working on so far, told one of the stories from the fieldwork I had conducted with them, and shared my ideas about it. We then reflected together on ideas using two different activities. The workshop served several purposes. I used it to update the tissue viability team on what I had been doing and what I was planning on doing in the next few months. But it also provided an opportunity for the team to express potential concerns to me, discuss these openly, and thereby clearing the air on any persistent misunderstandings. I explained that my study did not aim to improve or criticise their practices. Rather, I had been learning from them and their colleagues, and that the workshop was intended to share some of this. By using an anecdote from my fieldwork, I wanted to give them an insight into what I was doing, as well as invite them to reflect on things and further guide me. Finally, the workshop created space for me to express my gratitude. It lead to interesting discussions and new insights; for instance, how exposed several of them felt hearing a

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[9] The workshop was inspired by dialogue evenings about dementia I co-organised with the Partnership for Long Term care and Dementia in Amsterdam, see Hoppe et al. 2019.

story being told in which they played a role. The ideas we brainstormed in the workshop lingered over the following weeks. Some tissue viability nurses, even pointed out further examples of things we had discussed.

I initially planned to organise three of these workshops and, in hindsight, I would have liked to organise more, especially because it had been so fruitful and fun. However, during the fieldwork I realised how much pressure staff were under and how little time they had. It was difficult to find a slot the entire team could make it to, and there was no guarantee who might attend because of the varying number of patient referrals every day. I was under a lot of time pressure myself too to finish the dissertation. While I generously received an extension from the Wellcome Trust, and two from LSHTM in light of the impact of Covid, the short duration of these also meant the deadline for dissertation submission was always looming.

In addition to everything described above, I kept my eyes and ears open for anything pressure ulcer-related. I followed the news, and had many informal chats with people in and outside of Hospital B both about the pressures on the NHS and pressure ulcers. After days spent in Hospital B I sometimes chatted with my flatmate to ask her about some of the things I had seen or heard and did not quite understand. She happened to be a nurse in an Accident and Emergency Department and often told me about her own experiences, providing new insights into the NHS and the pressures staff are under.

This account of how I set up and conducted the study shows that unlike the kind of studies at the London School of Hygiene and Tropical Medicine by other disciplines that use rigid research protocols, an integral part of my research was to stay constantly adaptable and find and shift to the places which proved most productive. Rather than that being a weakness it is part and parcel of getting access to the kind of fields that I wanted to get to, and crucial to working alongside interlocutors rather than observe them from the outside.

Ethnography

The study is an ethnography; both the methods as well as the dissertation as an end product. It is not an ethnography in the classic sense, for which anthropologists go to a place far away from where they reside and live in a small community or village for a while to trace patterns in people's way of life. Rather, it is an 'assemblage ethnography' (Wahlberg 2022), meaning it is about a social problem, in this case the pressure on the NHS and the pressure on patients' skin, which transcends a particular location or small group of people. Centralising the problem in the study, allowed me to follow it to different locations, for example, into the medical device industry. Assemblage ethnographies study structures such as legislations, policies, technologies, and buildings, and how they interact with what people do and when. In my assemblage ethnography I side with nurses whose work is often not taken seriously (Ceci, Pols, Purkis 2017) and frame it as a 'matter of care' (Puig de la Bellacasa 2011). My focus on practices is further informed by Mol's (2002) argument that things come to be when they are done, which she calls 'praxiography', which requires detailed attention to be paid to everyday practices, which ethnography allows for.[10] Therefore, this is a study of what people and technologies do. Adopting an ethnographic methodology to study this problem has many benefits, three of which I will discuss here.

Explorative and iterative ethnography

Firstly, ethnography allowed me to work exploratively and iteratively (Spradley 1980, 29). The ethnographic research process is non-linear and cyclical (ibid.). It requires constant reflection. After each period of data collection, like an interview or a day spent on Ward K or shadowing one of the tissue viability nurses, I wrote down my fieldnotes of the observation as soon as possible afterwards. I did not only write what I saw or heard, but also added memos about such things as methodological choices I made, questions that I thought I should ask another time, patterns I noticed, connection to other things I had seen, ethical dilemmas that came up, and connections to literature (for more on this method of writing memos and fieldnotes, see Emerson, Fretz, and Shaw 1995 100-105). I used many of these memos to inform interviews and observations I did after. In this way I constantly moved between data collection, analysis, and theory. My project design developed through the fieldwork, not before it. One major advantage of this explorative nature of ethnographic research is that the field can inform your questions and focus to make the research more fitting and relevant.

While the fieldwork was constantly feeding into next steps in many small ways, there are three more significant ways in which it shaped the project. The first happened in the early stages of the research when I tweeted that I was interested in speaking to people working in pressure ulcer care and prevention. Someone working for a company that develops medical devices used in pressure ulcer care contacted me and told me that I should not ignore the big role industry plays in this field. This prompted me to add an extra arm to my study, to interview people working in this commercial area.

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[10] See Chapter 1 for more on the theoretical background of my focus on practices, in particular the section 'Care practices'.

Secondly, the iterative nature of the fieldwork shaped my aims for the research. Pressure ulcer prevention and care are often thought to be a nursing issue, but they are distributed over many different people and things. Tissue viability nurses work hard to spread the responsibility for pressure ulcer prevention amongst professions beyond nursing. While many researchers reproduce how pressure ulcers are a ‘nursing issue’, ethnography prompted me to follow pressure ulcer care through the hospital, across hierarchies, floors, and professions, and beyond.

The third way in which the iterative nature of ethnography shaped my research was finding my topic often met with disgust and horror. Whenever I told people about pressure ulcers, they told me about the most horrible wounds they had seen in their lives or how they would not be able to look at such extreme sores. I ended up pursuing this as a distinct line of research (for another study on horror around wounds, see Tanner et al. 2012). At the end of most interviews I asked the interlocutor to tell me about a wound that had stayed with them, one they remembered particularly well. I also asked about whether they ever had any nightmares about their work or wounds. And, after shadowing tissue viability nurses during patients visits, I sometimes shared my experience of shock or upset with them to invite a conversation about disgust. All of these led to new insights about the pressures the staff experience in their work related to horrific wounds, witnessing patients’ experience of pain, the weight of responsibility to prevent and care for patients’ wounds, how some wounds could have been prevented but were not, and asking colleagues to care for particular wounds because they were unable to face it. It also prompted interlocutors to tell me stories of how medical devices occasionally caused horrific wounds elsewhere, such as an elderly lady falling out of bed onto the button that moved the bed down, crushing her head and killing her (for more on this story, see, The Herald 2003). Sometimes the horror was hard to put into words, so people found ways to express it through humour. I often found them laughing with a kind of gallows humour (for more on anthropology and humour see, for example, Driessen 2015). It was staff who recommended me ‘This is going to hurt: Secret diaries of a junior doctor’ (Kay 2018), a recent comedic but critical book about a former doctor’s experiences in the NHS.

Participant observation and visceral learning

Another one of the key elements of ethnography is participant observation, sometimes referred to as ‘deep hanging out’ (Geertz 1998 as cited by Walmsley 2018). The ethnographer participates in the situation, immerses themselves in it, while also observing it (Spradley 1980, 54; Emerson, Fretz, and Shaw 1995, 2). They also reflect on this participation, their position in it, and which information and insights this brings to the table. I sometimes jokingly called this my ‘duckling methodology’ with the tissue viability nurses, when I was trying to keep up with their high pace on their way to patients. It was as if I was the duckling frantically running after a parent to keep up. Participation does not necessarily mean doing exactly what interlocutors are doing, but being an active part of the situation. When I shadowed tissue viability nurses’ patient visits, for instance, I obviously could not do all of what they were doing. Together, we found other ways in which I could take part. For example, in the following description of when I was shadowing tissue viability nurse Kirsty.

We both wash and disinfect our hands, put on gloves and a plastic apron before entering the patient’s room. The patient has a large wound and Kirsty gets everything ready and takes off the dressings covering the wound. Kirsty says to the patient that her wound *Looks very good!* She has put on sterile white gloves and is careful about touching things other than the wound and sterile things. To this end, she asks me to pour cleaning solution into a sterile plastic container. After cleaning the wound, she needs to measure it. There is a lot of *undermining*, which means the wound is bigger underneath the surface of the skin. There are tunnels and cave-like spaces underneath the skin. Kirsty feels how far the undermining reaches by sticking her fingers under in them. She can see how deep the undermining is, because the skin surrounding the wound bulges where Kirsty’s hand is in the wound. I help her out by holding the paper measuring tape from the wound edge to wherever it seems her finger reaches under the skin and she reads the measurements. She says: *Six centimeters undermining from about one o’clock to about six o’clock* and then asks me to pour solution into the container again and to open a dressing wrapper *like a packet of crisps* so she can pull the dressing out with her sterile white gloves. She dresses the wound.

Kirsty was good at thinking of things I could do to participate. Interlocutors and I found more and more things I could do as I spent more time in Hospital B, such as helping carry supplies form the store room, carrying breakfast trays to patients, opening and closing privacy curtains around patients’ beds, pouring cups of water, getting tissues, holding bin bags open so the nurses could drop waste in it easily, taking photos of wounds for the nurses so they could keep their gloves sterile, or taking notes of wound measurements so they do not have to write them down or remember them.

Participant observation allowed me to do two things, firstly, to observe mundane, taken-for-granted care practices, which Puig de la Bellacasa (2011) refers to as ‘matters of care’[11], such as the work of maintaining pressure redistributing equipment and ‘crafting’ (Whalen, Whalen, and Henderson 2002) care arrangements. I focus on practices like these. Unlike other research methods,

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[11] See Chapter 1 for more on the concept of ‘matters of care’ in the section ‘Research questions and aims’.

such as interviews which required interlocutor reflexivity, participant observation provided me access to these forgotten practices often considered unimportant.

Participant observation also, secondly, allowed for what Emily Martin calls 'visceral learning' (1994, xv), referring to Bloch's (1991) idea that some learning cannot happen through language, but through experiencing things with all of our senses, such as smelling, tasting, and feeling. It is similar to what Law (2004, 2-3) refers to as embodied forms of knowing. Both require an 'open attentiveness in fieldwork' (Mann et al. 2011, 224). My own experiences in Ward K that day with Yunus, for instance, was very intense. I too felt the pressure and suspicion weighing heavily on me. Experiencing this gave me insights into the pressure NHS staff and patients experience. Similarly, at a medical conference, where companies presented their products for pressure ulcer care, I was able to touch and inspect products to learn what it was like to use them. I tried on a boot designed to relieve pressure off the heel (see figure 2), which gave me a sense of how uncomfortably warm it makes your leg feel and why patients might refuse to wear them.

Similarly, my visceral experiences of shock when shadowing tissue viability nurses during their wound care work gave me insights I would not have otherwise been able to capture. I saw, for instance, many dressing changes revealing horrific pressure ulcers. Sometimes the malodour was so strong it made me nauseous, while patients screams of pain tensed up my muscles. All of these things were unspoken experiences. Participant observation is about learning to be aware of these, reflecting on them, writing memos about them, and using them as 'data' to feed into the thinking.

Figure 2: I took this photograph which shows my leg and foot wearing a pressure relieving boot at a medical conference.

Becoming part of the furniture; Insider-outsider perspective

The final characteristic of ethnography that benefitted my research was the insider-outsider perspective. In many ways, the field was strange to me at first. I did not know much about wound care, medical devices, and pressure ulcers. The NHS itself, and how people in the United Kingdom talk and feel about it, was curious to me too. Murals like the one I show in the introduction of this dissertation, and other art and crafts expressing thanks to the NHS, as well as advertisements in bus stops for nursing jobs in the NHS looked patriotic to me. A staff recruitment manager told me people apply to work in Hospital B to become 'part of the NHS family'. Over time I became more familiar with the complicated feelings many people in the United Kingdom have about the NHS and its history (see also Cowan 2020). I had short spontaneous informal chats at the bus stop or in the swimming pool and everyone agreed the NHS is under a lot of pressure. Slowly, the NHS became less strange to me.

After a while of immersing myself in the field, I started to get used to the language, understand interlocutors' reasoning, and become a part of the team a little bit. This is referred to as becoming an 'insider' (see, for example, Shore and Wright 2011, 15; Spradley 1980, 56-57). At the end of one of the days I spent with the tissue viability team, when we were all catching up on emails, reporting about patient visits, and I was writing notes, I realised my hair clip has caused a bit of a bruise under my hair. I jokingly told the nurses Tamara and Clara that I had started seeing everything as pressure now. We all laughed. Clara then said that when she sees an apple with a spot on it she sometimes thinks; 'Hm that is unstageable'[12] and we all laughed again. I followed up by saying when I bite into an apple that looks perfectly fine on the outside but is rotting inside, I think, 'Hmm must be osteomyelitis.'[13] Everybody laughed again.

This account illustrates how comfortable we had become around each other, as well as how I had started to think like the team members in terms of interpreting everything in terms of pressure ulcers. Sometimes the tissue viability team lead referred to me as 'part of the furniture'. At the same time, I remained an 'outsider', because my objective for being there was clearly different from theirs.

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[12] This is a category of pressure ulcer development.

[13] This is an infection of the bone, which is often invisible but can be very dangerous.

Analysis

In line with the ethnographic and iterative nature of this study, the analysis was ongoing from the start, in contrast to other types of research that start their analysis at the end of data collection. The visceral experience of doing fieldwork is a constant process of making sense of, engaging with, and responding. During fieldwork I tried to write out my fieldnotes as soon as possible after the observation or interview and reflect on it immediately. Through constant reflection, I started developing ideas for arguments, and drawing links to literature. I paid attention not only to patterns, but also to tensions and contrasts (Laurent et al. 2021). I used a variety of strategies, such as making mind maps, and writing memos and more extended reflections which I discussed with my supervisors. After intense fieldwork days I sometimes debriefed with a friend, thinking through the experiences of the day. Additionally, I presented my work at academic conferences and workshops. As ideas developed, they shaped not only this dissertation, but every step in my fieldwork. I also presented my thoughts to my interlocutors, and we reflected on them together.

Alongside these analytical practices, I developed a list of themes, topics, connections, questions, and juxtapositions (Vogel 2021), which I updated several times over the course of the fieldwork, producing a record of how things changed over time. When I completed fieldwork and had finished writing up all fieldnotes and summarised or transcribed all interviews, this list became my initial coding scheme. I used NVIVO software to organise the data, code text, and 'hunt for pearls', as my supervisors called stories that were key to my argument.

The writing and rewriting of outlines, chapters, and papers was a constant puzzle of where ideas and data would go, and what to include and exclude. While the papers are not completely separated by set of data, there are some broad strokes. Analysis was not only about what to write about, but also what not to write about. I have many more ideas for papers, such as a paper on my horror methodology, and one on the problems around the variety of skin colour in pressure ulcer care and how people and the industry talk about this. For the purpose of this dissertation, however, I kept central ideas about pressure, in order to make a coherent whole. These choices in my analysis raised many ethical questions too, such as, who to write about? How to represent them? And how to do them justice and not harm? I will reflect on these and similar questions in the next section.

Ethics: Pushed out of place, finding a place

Formal ethics

After getting in touch with Hospital B and doing preliminary work there, I needed formal ethics approval to conduct the study. Colleagues warned me it would take a long time, ranging from several months to a year, or potentially it would not work out at all. They asked me to seriously consider whether I should be doing it at all, or change to a site outside of the NHS. With this in mind, I started filling out the extensive paperwork nervously. From beginning to end, the HRA (NHS Health Research Authority) process took five months. After having obtained ethical permission from the HRA, I got permission from the London School of Hygiene and Tropical Medicine's ethics committee easily. I then had to reach out to Hospital B's Research and Development team for local access to the site. This process took another eight months to complete. It was subject to many delays due to the Covid-19 pandemic and mistakes that were made by the Research and Development team and HRA; for example, sending misguided information on which paperwork to complete and how to do so. I prepared various sets of documents, including the Local Information Package, Summary of Cost Attribution, Schedule of Events, and Research Passport, most of which were irrelevant for my study.

I discussed my experiences and thoughts about the process in detail with my supervisors, a group of early career qualitative researchers called Kritikos based at the London School of Hygiene and Tropical Medicine, and with Gemma Hughes who published an article about her experiences of going through the NHS ethics procedures with her ethnographic study (Hughes 2017). While I understand and agree with the importance of going into the fieldwork having reflected carefully on how to keep interlocutors safe and protect them from harm, the NHS procedure does not promote this sufficiently or effectively. Looking back at the process of obtaining formal ethical permission for the study I have three critical notes.

Firstly, the questions asked are standardised and do not suit an ethnographic study. As Allbutt and Masters (2010) and Hughes (2017) point out too, they are designed for biomedical research and clinical trials, forcing the ethnographer to translate it into a language ill-fitting for their ontology. Clinical trials have a clear plan for every step of the research process such as exact numbers of 'participants'[14] and how much time the study will take. Ethnography, by contrast, starts with a broad plan which adapts to what is learnt along the way. While Hughes argues that 'the problem for the ethnographer is not that she is unable to predict what she will find, but that she will be unable to

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[14] This is a word not often used in ethnographic research, which tends to use 'interlocutors'. This illustrates further that I needed to translate my study to fit the HRA's ethics boxes.

predict exactly how she will go about exploring her object of study' (ibid., 6), I think it is the other way around. The problem is that the ethics application does not facilitate the strengths of ethnographic research. The explorative, iterative, flexible nature of ethnography is one of its main strengths. Limiting this is a missed opportunity.

Secondly, the procedure assumes research is intrinsically risky, rather than valuable, and focusses on strategies to avoid or limit harm. The application does not support researchers to think of ways to make their study more ethical or more beneficial. This is a second missed opportunity to create better research that can benefit the NHS.

Thirdly, the ethics procedure is largely a tick box exercise. It is required at the beginning of the project to grant access, with a brief report needed at the end. The researcher is forced to commit to static rules when they fill out the forms that do not allow for situated ethical solutions to local problems, or promote constant reflection throughout the project. But doing ethical research is an ongoing process that never ceases. One of the HRA's demands, for instance, is that interlocutors sign informed consent forms, which has been criticised as unsuitable and harmful to ethnographies' contributions (Murphy and Dingwall 2007). Signing an informed consent form is a one off event, but it is common in ethnography to practice 'continuous informed consent' (see, for example, Klykken 2022 and Plankey-Videla 2012), meaning that the ethnographer makes sure interlocutors continue to agree to taking part and feel comfortable doing so throughout their continued interactions. It can be argued that a single request for informed consent is actually less ethical. More than once, I had an informal conversations with a member of staff who agreed to an interview or me shadowing but when I asked them to read and sign the informed consent form and they hesitated. The business-like contract, and losing some of their anonymity by having to write down their names, eroded any trust built during our conversations prior to revealing the form.

The process of going through these ethics procedures and getting stuck in them for so long made me feel powerless, intimidated, and unsupported. I was put in the impossible situation where a single misstep felt like it could ruin the project. I frequently ran into situations where following the HRA's rules would have been less ethical than adjusting to the situation. Given my research topic I was always thinking about how to prevent putting additional pressure on nursing staff while adhering to imposed ethics rules. I was lucky to be supported by my supervisors who helped me think through some of these tricky situations.

All in all, the process of obtaining permission to conduct my study in the NHS resembled a rite of passage; unpredictable and unclear, but essential to pass. I got, for example, different answers from different people I contacted, and some forms were updated in between the time I downloaded and submitted them. It felt like I was being taunted. Additionally, although it may seem a linear process of steps one needs to go through that build upon each other, it is not. The Research and Development committee, for example, requested an amendment even though the HRA had already approved my study. Ironically, although the HRA and research development committee asked for a detailed planning of each step of the research and how long it was going to take, they left me in the dark about how long their own processes were going to take. This makes the NHS's long, unpredictable bureaucracy, unsuitable to the temporality of a PhD, limited to three or four years.

Finally, the whole process harms the NHS itself, because it is widely known amongst ethnographers how hard and lengthy it is to obtain ethical permission to set up a study. This discourages ethnographers from studying in the NHS, and providing unique insights that might contrast with clinical trials and other types of biomedical research.

During my conversation with Gemma Hughes, she suggested I view my experience of requesting formal permission to conduct the study at Hospital B as a first part of my fieldwork. Inspired by this conversation and Robinson's (2020) paper on how to unpack ethically complex moments as part of fieldwork and data collection I started to reframe these experiences of obtaining ethics permission as a first-hand experience with NHS bureaucracy and its audit culture.[15] The process helped me understand and relate to interlocutors' stories of frustration with the mountains of paperwork their jobs require, how many of the forms are not suited to their jobs, and their concerns that pressure ulcer prevention was becoming a tick box exercise. Going through the process of obtaining ethical permission, granted me both these insights as well as access to Hospital B.

Ethnography with care: Ethics in practice

While the process of obtaining formal ethics permission was a long and extensive process, it did not grant me full access to the field. Instead, it granted me permission to try setting up the study, which relies on building relationships and trust with gatekeepers and other interlocutors. For my work on Ward K, for example, the ward manager had given me permission to do my study, but it took quite a bit of time for the other staff to trust and approach me. It may have really helped that early on a nurse who was well-loved by her colleagues made contact with me. At the same time, on especially pressured days like the one I experienced with Yunus, there was still a level of suspicion. This raised questions about what was ethical in practice? How not to add even more pressure on the staff? How to care for the interlocutors?

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[15] For more on audit culture in NHS ethics committees, see Langer 2005. For an analysis of audit culture more generally, see Strathern 2000.

Pressure and care

Conducting this research during the Covid-19 pandemic made my study feel small and unimportant at times. NHS staff were being called ‘essential workers,’ ‘frontline,’ and ‘heroes.’ Pictures of their PPE-imprinted (Personal Protective Equipment) faces were stuck in my mind (Mason 2020; Pilston and Campbell 2021), raising the threshold to ask for interlocutors’ time. I struggled with guilt that the study was taking away from their time to save the country from the pandemic, and patients from the virus. How do you measure up to ‘essential work’ as a PhD candidate trying to finish their study before their funding stops?

I decided I had to be especially mindful to avoid adding to the pressure with my study. To this end, I chose against focus groups where hospital staff all have to be available at the same time and need to invest time in it. Instead, I chose non-intrusive and non-time-intensive methods of interviewing, shadowing staff during their work, and observing team meetings. If I needed more time once we were running close to their next appointment I sometimes suggested scheduling a follow up interview. Aiming not to add to the pressures staff were under was one of the ways in which I tried to care for the interlocutors and fieldsite during the fieldwork.

Transparency and consent

Inspired by critical analyses of informed consent procedures in ethnography, such as Plankey-Videla’s (2012), I tried to practice careful ethnography by reflecting on how ‘informed’ interlocutors could actually be about my research. Most of my interlocutors were clinically trained, which is a fundamentally different training than mine in anthropology and ethnography. It took me years of training to get a grip of what anthropology is and brings to this world, raising the question of how ‘informed’ interlocutors can be by an ‘informed consent’ procedure. I decided it was important to give interlocutors concrete examples of possible consequences of participating in the research, and explaining how I might use quotes of what they say in research papers. Several interlocutors mentioned they were hoping my study would provide what they called ‘the silver bullet’ about how to prevent and care for pressure ulcers. I explained that my study is not aimed at directly improving clinical work, because this lays outside my disciplinary training. Since these assumptions and misconceptions about my study were pervasive and mentioned repeatedly, I spent extra time on it during the workshop I organised for the tissue viability team.

Another way in which I cared for interlocutors was to continually check if they were comfortable with my presence. I paid attention to their body language, or suggested I wait outside until a patient visit was done. Additionally, I made sure it was clear I was a researcher at all times by wearing my London School of Hygiene and Tropical Medicine keycard around my neck and taking notes visibly (Pope and Allen 2020, 72). This meant interlocutors could approach me to ask who I was and what I was doing, pointing to my keycard, and it helped me be clear about my role.

In order to care for the patients, I always asked for staff's judgement on whether to approach them or not. In contrast to Allbutt and Masters (2010), who argue this type of gatekeeping is patronising to patients and may bias the study, I found it a helpful way to care for both the staff and patients. Whether I approached patients depended, firstly, on whether they thought it would disrupt the patient or their work. Approaching patients for informed consent also depended on whether members of staff thought the patient had capacity to verbally consent and understand what I would explain about my research. Usually, staff would ask a patient whilst I was not present, and then I would come to introduce myself and my study, and give them an information sheet. If the patient did consent, I continued to pay attention to their body language to make sure they were comfortable. If the patient did not seem like they were able to understand what I was saying, I waited in the corridor for the tissue viability nurse or went back to their office. This happened a lot, because many pressure ulcers develop in elderly patients, many of whom live with dementia or deafness. There were many days when I joined a tissue viability nurse to see three or four patients but could not observe any of their visits. This was exacerbated by my choice not to observe patients that had Covid, so I would not contribute to the risk of spreading it to others. Since I was observing the tissue viability nurses more than the patients during these interactions, and in order to protect the identity of patients, I did not take written consent or record their verbal consent myself. Instead, I asked the tissue viability nurses to record the patients' consent in the notes they wrote in their electronic record after the patient visit. I reminded them every now and then, but I cannot be sure whether they did it every time, because I was not a part of their writing the notes.

Vulnerabilities and protection

There are two main types of sensitivities in my study. Firstly, sensitivities around commercial companies' regulations about sharing information and how it is used. Members of staff responded to me in different ways - from cautious to relaxed - and sometimes checked with the company's legal team. Only once did an interview fall through because of this. The person had emailed me saying she wanted to make sure that she covered all her bases with the legal team. She said that she was sure everything would be fine, but that she wanted their green light before having a second interview. A while later she said that she would like for me to remove all data and that we could start from scratch again. The situation posed a dilemma as I had interviewed another employee from the same company, which would have been a shame to lose too. I emailed her, and was very relieved when she responded she was not worried and would not step to the legal team. This showed the variation interlocutors' responses to the sensitivities in their field, even within companies.

The second sensitivity in my study is around pressure ulcer care specifically. Since pressure ulcers are considered to usually be consequences of mistakes, the stakes are high. The most common way to protect fieldsites and interlocutors is through anonymisation, but this is not a one-size fits all solution (Vorhölter 2021). I draw on Scheper-Hughes (2000) paper in which she describes how she revealed community secrets in her ethnography of a small Irish community. It lead to people feeling exposed and betrayed and she was no longer welcome there. To prevent this kind of harm to my interlocutors I reflected on questions such as: Who and what am I trying to protect? From whom and what? Am I trying to protect the medical device company, hospital, individual members of staff, or patients? What is potentially sensitive information if it is traced to places or people and who would want to do so? For each piece of information, I considered the risks. Some quotes, for instance, might be traceable to an individual by other members of staff in hospital, but this might not pose a risk to them. Other quotes I chose against using or described indirectly instead. Generally, I added various layers of anonymisation, for example, by choosing pseudonyms. I searched for names used in the area where they were from that were popular around the time they were born. This was sometimes based on rough guesses of mine. While I am aware this reduces the anonymisation, I weighed it against the importance to represent the diversity of people I spoke to. In hindsight, I think there might have been benefits in asking each interlocutor if they have a preferred pseudonym for me to use in case I ended up writing something about them.

Throughout, I worried about potentially exposing too much about my interlocutors, and whether they might feel betrayed or that I might open them up to criticism. This is not my intention. Instead, I aim to be their advocate by showing the pressures the NHS and its staff are under and how this connects to the pressure on patients' skin.

Positionality and privileges

Reflecting on the ethnographer's role in shaping the situation they are observing is an important part of ethnographic data collection and analysis as well as ethnographic writing (Powell 2022). I am a White, young, Dutch, female student. In contrast to most members of staff, I never wore an NHS uniform during my fieldwork in Hospital B. The latter meant I was often mistaken for a doctor by patients. It also mattered that I was a PhD student. Several nurses indicated to me they wanted to do a PhD, but did not have the time and money. At times this created an imbalance, for example, because the Wellcome Trust gave me money to attend conferences about the newest developments in pressure ulcer care. Most of the nurses in Hospital B could not attend these. One of the tissue viability nurses and I considered going to one of the big conferences about pressure ulcer and wound care together, but she could not free up the time from her work in Hospital B.

My role as researcher also meant over time I built relationships with and routes of access to members of hospital staff in different roles across hierarchies, such as healthcare assistants, directors, tissue viability nurses, matrons, and procurement managers. Some of the people are hard to reach for other hospital staff. It was a privilege that they made time for my work. I also had access to patients who, in the beginning of my fieldwork, were not allowed to have visitors due to Covid-19 prevention policies. Some of the patients I saw had been in hospital for months without visitors. My study enabled me to visit them, while their family and friends could not.

My Whiteness also shaped my positionality. From the outset of the study, I wondered whether there were any racial tensions that shaped the dynamics of the space I was in. There are two particular moments when I started questioning the role of race and the social dynamics around it. The first was after a chat with a healthcare assistant in the break room on Hospital B ward. I thought we were having an informal chat about her work and my study, but by the end she said her break was over and asked me 'Can I go now?'. This question about permission made me realise we were both having entirely different experiences of the situation and I had been unaware of how she perceived a power difference between us. I felt bad for having done so and not noticed earlier. I worried I might have made her feel uncomfortable. In reflecting on this moment, I realised my Whiteness may have had something to do with her perceiving me as someone with power over her. From what I had seen, in Ward K, many people of colour were working as healthcare assistants and nurses, while the positions with more power, such as ward managers, matrons, and directors of nursing were predominantly occupied by White people. Another time, my race mattered was when I was shadowing two healthcare assistants who were both people of colour on the high bay. One of the White patients living with dementia made racist remarks towards them, including me in their remarks. At first I was not quite sure what was going on, but when it happened again, I decided to ask one of the healthcare assistants if she was okay and we chatted about it for a while. Sometimes racism seemed to be not present at all, at other points in time it was explicit. I am still not sure how to make sense of these two moments and whether racism is the right lens through which to interpret them.

A further privilege is that through writing this dissertation I have power to represent things. One of the choices I ran into is which pronoun to use when writing about nurses. Since nursing work is mostly done by women, and women's work is being and has historically been made invisible in many ways (Latimer and Ozga 2010), I considered using the female pronoun 'she'. However, in doing so, I would potentially reproduce the feminine bias about nursing (see, for example, Nursing and Midwifery Council 2017, 28). For this reason, I decided to use they/them pronouns. A second linguistic choice I made was to write fieldnotes and quotes in the 'ethnographic present' (Fabian 1983, 80). This was a stylistic choice that compels the reader to feel present along with myself as researcher in the field. I do not aim to mimic objectivity with this style. I make regular reference to clear moments in time, in particular the Covid-19 pandemic and the major nurses strikes in 2022 and 2023, to make it clear that I do not want the text to be read as though it were 'out of time'.

I shared the privilege of doing the study and all I learned from it with my interlocutors in several ways. The iterative nature of ethnography meant I fed my ideas back regularly. And after submitting my dissertation I presented my reflections on the field in three hospital meetings, and I plan to send interlocutors my dissertation.

Throughout the fieldwork my presence as ethnographer provided interlocutors with the benefit of having a relative outsider to talk to about the pressures they were experiencing at work. One nurse told me 'I want to talk to you' so that then I could write about what she had to say. Others half-jokingly referred to me as their 'therapist' or 'wingman'. At the end of an informal chat with a matron, she got up from her chair and let out a big sigh and giggle, saying 'Thank you for the counselling session.'

All in all, ethical ethnography is about building and honouring relationships. My dissertation shows that there is much more than the formal expectations of 'good care' for patients or interlocutors defined by managerial audits with goals, targets, and tick boxes. The healthcare staff, like me, have to stay flexible on an everyday basis. They continually need to respond to things that escape formal processes. The formal ethics procedures are systematically made into 'the ethics,' but they do not prepare for ethics in practice. While the formal procedures made my project and me feel dislocated, the tissue viability team and the multidisciplinary team helped me find my place in Hospital B. When I completed my the main fieldwork I thanked them personally for welcoming me into their team with a small gift and a note for each of them. We sat around a table with cups of tea and chatted about what I was going to do next. It was not a real goodbye because we stayed in touch afterwards, but it was a very nice moment to share.

Pressure patchwork: Leaving and staying

Medical anthropology frequently finds itself exploring fields that are under various kinds of pressure, such as time pressure, or pressures of a financial, moral, political, or ecological nature. These pressures often make it difficult to conduct research. For example, access may be restricted to minimise the risk of negative media coverage, ethics approval may be withheld, or interviews cancelled because of ever-increasing workloads. Asking for the time of interlocutors in fields under pressure raises questions about research ethics and burden. In other instances, research on pressured fields may prove generative. At the same time, researchers are themselves increasingly under various forms of pressure, which in turn shapes their engagements with their respective fields. How are these different pressures entangled and how did I navigate them in my research?

Pressure features threefold in my PhD study. Firstly, I study the pressure on the NHS, and within this system under pressure. Secondly, I study the pressure on patients' skin[16]. And thirdly, in conducting the study, I found myself and my methodology being under pressure. The day I spent with Yunus exemplifies all three pressures, and how they feed into each other. These pressures and their interactions raised all kinds of practical and methodological questions: How not to add to pressure, but arrange access and set up the study? And how to adapt my methodology to not add pressure to my already overstretched interlocutors? In conducting and developing the study it had to respond and transform with the pressures it was under and that were in it.

While the pressures due to Covid were obstructive and restrictive at times, at other times they were also productive and creative. During the pandemic there was more public and media attention about the pressures on the NHS and the increased number of pressure ulcers. This seemed to reduce some of the pressure from my study, as interlocutors seemed to be more easily convinced of the urgency of my study. Furthermore, Covid provided a shared experience between me and my interlocutors. While we were video-calling, we understood each other's situation better - or at least felt we had empathy for each other's situations. I leaned on this to connect with my interlocutors

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[16] See the introduction and methodology chapters for more on these pressures, their connections, and how I conceptualise them.

from industry during virtual interviews, discussing what it was like to work from home and what the restrictions were like functioned as ice-breakers. They built a connection.

Thinking with pressure and how to distribute it helped me patch up the tears in my study by adding the fieldwork in industry and the process of setting up the study in the NHS. As a result, my fieldwork and dissertation have become a 'patchwork ethnography' (Günel, Varma, Watanabe 2020) of different blocks, rather than one long immersive period of fieldwork and ethnography. Patchwork ethnography acknowledges how the ethnographer's life, with all its competing elements, such as the Covid pandemic and care responsibilities, shape the research. It opposes outdated ideas of holism, and acknowledges the reality of ethnographer's life. In doing so, it celebrates more fragmented types of fieldwork. In my patchwork ethnography I have stitched the stories, reflections, and experiences together into a new pattern.

Nevertheless, while in many ways my fieldwork was fragmented and did not go as initially planned, in other ways it was continuous. I stayed in touch with the tissue viability team throughout the pandemic, and am still in touch with them today, almost a year after completing my fieldwork in Hospital B, and I am keeping them and their colleagues in mind as I write this dissertation.

On my last day with the nursing staff in Ward K I brought a big box of chocolates and wrote a thank you card. I put it in the team room; a small room with a sink and fridge, some lockers, and a table with four seats around it. It is so small, no more than five people can comfortably be in the space together. Masks come of, literally and figuratively. The tap drips in the background as I talk to one of Yunus' colleagues, Virika. She is a nurse in Ward K whom I met and shadowed several times before. As she gets up to get back to work, I tell her it is my last day on Ward K. We realise this means we might not see each other again and give each other a long hug. She says she looks forward to seeing the thesis and looking up where I write what she told me. She holds up her hand, thumb and index finger close together, looks through the small space in between them and says: *A tiny bit, a sentence or two of what I told you.*

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Chapter 3: Paper 1: ‘0 days since a pressure ulcer’: Navigating blame and learning in the National Health Service

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Student ID Number	1902241	**Title**	Ms
First Name(s)	Elisabeth Maria Lidwina		
Surname/Family Name	Roding		
Thesis Title	Under pressure: An ethnography of the choreography of pressure ulcer care practices in the NHS		
Primary Supervisor	Prof. Simon Cohn		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

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Where was the work published?			
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Please list the paper's authors in the intended authorship order:	Els Roding
Stage of publication	Not yet submitted

SECTION D – Multi-authored work

For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)	

SECTION E

Student Signature	
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Paper 1: ‘0 days since a pressure ulcer’: Navigating blame and learning in the National Health Service

Abstract

Around the beginning of the twenty-first century several reports were published about promoting patient safety in the United Kingdom’s National Health Service (NHS) through a move away from ‘culture of blame’ to a ‘culture of learning’ (Department of Health 2000; Francis 2013; Berwick 2013). This ethnographic paper unpacks several ambiguities in this policy shift in the context of pressure ulcer prevention in an NHS hospital. Pressure ulcer prevention has been given a central place in improving patient safety through campaigns based on the idea that they are avoidable and consequences of mistakes made. Nurses are held responsible and accountable for their prevention. I show how, in this context, blame can never be completely replaced by learning, and how nurses in managerial roles, and those specialised in wound care (called tissue viability nurses) navigate multiple values and interests that surface in different contexts.

‘0 days since a pressure ulcer’: Navigating blame and learning in the National Health Service

I am left waiting for a moment.[17] Amanda[18], one of the tissue viability nurses specialised in wound care and I just finished a patient visit. She works on a computer in Hospital B’s corridor to document what she did with the patient and details of their pressure ulcer, and record her advice on the virtual reporting system. She needs to focus, so I need to wait until she is finished before the next patient. While I wait, I walk Ward K’s corridors.

I hear lots of phones, beeps, voices, and other noises. I assume the doctors’ rounds have started, because I notice a group of people standing around portable computer trolleys outside patient rooms, with a few going in and out a couple of times. A board on the wall is covered with cards for nurses’ day and thank you cards. Some are from patients, some from relatives, and some from doctors. The cards are spilling over the edges of the board and onto the surrounding wall. As I help someone move a chair back into the staff meeting room, I notice an A4 paper with an oval shape on it and: *Stress relief: Bang head here.* Back walking the corridor, I pass a more official-looking poster, *Stop abuse of NHS staff*.

Particularly striking are the certificates for having gone 50 days without a pressure ulcer being acquired on the ward, and another one for 200 days. The certificates are symbolically bronze, silver, gold, or platinum depending on their numbers. They are surrounded by photos of small groups of members of ward staff holding the certificate, smiling. A little further down the corridor there is a large whiteboard on the wall. It has sentences stuck on it, with gaps to fill out the numbers of the days with removable marker so the totals can be updated regularly. This way anyone walking the corridor - patients, family, friends, doctors, managers, therapists - can see that today there are 32 beds in Ward K, and that they normally have six nurses, but today there are four, and instead of six healthcare assistants, only four. The night shift will be fully staffed. There is also information on infection control and the number of patient falls. Finally, it says:

> *It has been … day(s) since a pressure ulcer was acquired on this ward.*

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[17] I chose to write fieldnotes in the ‘ethnographic present’ (Fabian 1983, 80). This was a stylistic choice that compels the reader to feel present along with myself as a researcher in the field. I do not aim to mimic objectivity with this style. I make regular reference to specific moments in time to make it clear that I do not want the text to be read as though it is ‘out of time’.

[18] The names used in this article are pseudonyms to protect interlocutors’ anonymity. This includes the pseudonym for the fieldsites in this study; Hospital B and its Ward K.

Today the blank space has been filled with a 16. Another day it said it had been four days since a pressure ulcer was acquired on the ward.

Pressure ulcers, also referred to as pressure sores, pressure injuries, or bed sores, are an injury to the skin that occurs when it is under pressure for a prolonged period of time. When a person with impaired mobility, for example, lies still in the same position on their back in bed for hours on end, they are at risk of developing a pressure ulcer on their heels, lower back, and other areas. Anyone in that position would be at risk, but pressure ulcers develop more often in people experiencing poor health, rendering their skin vulnerable. They range from a red or dark mark on the skin to severe, deep wounds in which underlying tissues like muscle or bone are visible. They can develop rapidly, sometimes within hours, and are categorised as chronic wounds because their healing process can be lengthy and not straightforward. It can take from weeks to years. They can be serious, painful, and life-threatening.

In the NHS most pressure ulcers are considered an 'avoidable' injury (NHS Improvement 2018^{B}, 2) or 'avoidable harm' (Fletcher, Jacklin, Adderly 2021, 15), and framed as a consequence of mistakes, such as not helping patients reposition frequently enough, not using the mattress that is deemed appropriate to their level of risk or not fulfilling other prevention practices.[19] Pressure ulcer incidence is used as an indicator of patient safety and quality of care across wards, Trusts, and the wider NHS (ibid.), contributing to a metric of surveillance and accountability. The whiteboard on the corridor wall, for instance, publicly displays one version of pressure ulcer incidence at ward-level, implying it means something about how good and safe the care provided is. But what does it mean to healthcare staff to have their work or not-doings be framed as mistakes? What does it mean to conceptualise mistakes as opposite to safety (Jerak-Zuiderent 2012)? How did this conceptualisation of patient safety develop in the NHS?

In the 1990s and 2000s several incidences of serious harm to patients in the NHS were widely reported on in the media. For example, cases of misdiagnosis in a bone tumour service, malfunctioning women's cancer screening services (Donaldson 2001), deaths of babies receiving heart surgery (Department of Health 2002), and problems in the Mid Staffordshire NHS Foundation

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[19] The concepts of pressure ulcer prevention, pressure ulcer treatment, pressure ulcer management, and pressure ulcer care overlap in meaning. Pressure ulcer treatment can mean using creams, dressings, and technologies like pressure redistributing mattresses to promote healing of a pressure ulcer, but these practices also prevent the pressure ulcer from deteriorating and new pressure ulcers from developing. Pressure ulcer care and prevention, however, encompass more than pressure ulcer treatment and management. In my use of the concepts, the former include a wider array of practices that aim towards improvement of pressure ulcer outcomes, such as staff trainings on pressure ulcer prevention, and multidisciplinary meetings to investigate pressure ulcers. Pressure ulcer treatment and management, by contrast, refer to practices more directly related to specific pressure ulcers on individual patients.

Trust resulting in serious patient suffering. Many NHS users had fears and concerns about the safety and quality of their care. In an attempt to reassure and reduce incidence of medical error in the NHS, several inquiries and policy shifts were introduced (Donaldson 2002). Three influential reports were published; (1) "An organisation with a memory: report of an expert group on learning from adverse events in the NHS" (Department of Health 2000), (2) "Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry" (Francis 2013), and the latter's translation into a more directly and immediately applicable set of lessons to apply immediately towards improvement of care (3) "A promise to learn– a commitment to act. Improving the Safety of Patients in England" (Berwick 2013).

All three argued that the NHS's procedures for learning from avoidable 'adverse health care events' were insufficient and framed the problem as the NHS's organisational culture. They reported that there was a negative culture of fear and blame with 'a lack of openness to criticism, a lack of consideration for patients, defensiveness, looking inwards not outwards, secrecy, misplaced assumptions about the judgements and actions of others, an acceptance of poor standards, [and] a failure to put the patient first in everything that is done' (Francis 2013, 65-66). In this culture the focus was on blaming people, events, and practices in close spatial and temporal proximity to what went wrong, rather than identifying and addressing more structural problems. The reports argued that while individuals are sometimes to blame, these are exceptions to the rule. Usually the problem is systemic, so a culture change was needed to promote transparency, and accountability (ibid.). The foundation of this culture, the reports argued, should be a system of 'reporting, recording, [and] analysing' (Donaldson 2002, 454). Through these new audit practices, learning can take place at a system-level. The reports have been met with criticism about the underlying mechanisms proposed to change the system or culture. Mercer and Flynn (2017) point out that while the Francis report argues nurses should recreate and maintain their professional values, such as compassion, the NHS's neoliberal system opposes these. They write that "core values such as care are compromised by, or in conflict with, a larger agenda of cost, where performance management and target-driven outcomes reconstruct the central relationship between carer and client" (ibid., 44).

Jensen (2008) makes a similar point about ambiguities in individual or collective responsibility in relation to the American report "To Err is Human: Building a safer health system" (Kohn, Corrigan, and Donaldson 2000). Jensen shows that in attempting to move away from a 'culture of blame' the report draws on arguments favouring a structure or system perspective. But when moving towards a 'culture of safety,' it emphasises individual agency by presenting members of staff as intentional individuals with the power to effect change.

This critique resonates with a wider debate about neoliberal governments' strategies to decentralise and individualise responsibility. Strathern (2000, 3-4) argues that neoliberal governments' aim to reduce the management work of public institutions by pushing more responsibility to public institutions and their staff by making them monitor themselves. One of the ways this is done is by having staff document more of their work and the government auditing the reports with their performance indicators. This way, individual members of staff are made to feel they have accountability to their government in their work.

One line of criticism on this individualisation of responsibility points to the interrelational and interdependent nature of responsibility. Mol (2006), for instance, unpacks how in the neoliberal 'logic of choice', health care is thought to improve if patients are able to make choices about it themselves. She contrasts this with how, in reality, health care relies on the basis of connections and relationships between people forming a collective. She calls this a 'logic of care'. Trnka and Trundle (2014) similarly argue against the neoliberal, individualising concept of responsibility. They highlight that there are many different forms of responsibility, and emphasise (inter)dependency and recognition of needs in others as being central.

In this way, using pressure ulcer incidence numbers can be seen as a neoliberal strategy to decentralise and individualise responsibility. While members of staff in a variety of roles, such as physicians, occupational therapists, physiotherapists, and dieticians, are involved in pressure ulcer prevention and management, it is the nurses who are held accountable (Fletcher, Jacklin, Adderly 2021, 15). Pressure ulcer prevention has become centre stage in the ambition to improve patient safety in the NHS. After the Francis and the Berwick reports a series of campaigns have been launched, such as the 'Sign up to safety' campaign (Monitor 2014; The Health Foundation n.d.), and the 'Harm Free Care' campaign (NELFT n.d.). They are aimed at eradicating the most 'common harms' (NHS England n.d.), one of which is pressure ulcers. The narrative these campaigns reproduce is that pressure ulcers are mostly avoidable, and framing them as the consequence of mistakes. Nurses are managing these high stakes and pressures in a context of a policy move from a 'culture of blame' to a 'culture of learning' (Department of Health 2000; Francis 2013; Berwick 2013).

This paper unpacks this shift, the ambiguities in it, and how nurses navigate them, focussing on two groups in particular; (1) nurses in managerial roles[20], for example, ward managers, matrons, and directors of nursing, and (2) nurses specialised in wound care called tissue viability nurses. It is part of my doctoral study about pressure ulcer care and the pressures on the NHS. Drawing on ideas and practices based in (medical) anthropology, (medical) sociology, and Science and Technology

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[20] I use 'managerial nurses' to describe nurses in managerial roles, such as ward managers, matrons, and directors of nursing. Since only a few nurses work in each of these roles, grouping them into one collective protects interlocutor's anonymity.

Studies, I conducted a hospital-based-ethnography[21] about pressure ulcer prevention and care practices in the first nine months of 2022. I spent about two or three days a week in Hospital B, and was mostly based in the tissue viability nurses' team. I shadowed them during their weekly team meetings and patient visits. Additionally, I observed weekly multidisciplinary team meetings in which pressure ulcers were investigated, and I spent time on the wards shadowing nurses and healthcare assistants. The current paper is based on all this fieldwork, but mostly on the twenty-seven interviews I conducted with various members of staff involved in pressure ulcer prevention and care, such as physiotherapists, tissue viability nurses, quality improvement managers, recruitment managers, nurses, directors, procurement managers, ward managers, and matrons.

Practices of blame and learning

What does the culture of learning look like in practice in pressure ulcer care? And who does what in pressure ulcer prevention? As outlined above, the responsibility for pressure ulcer prevention is placed mainly on nurses. Nurses in different roles in hospitals have slightly varying responsibilities when it comes to pressure ulcer prevention and care, which puts them in different positions regarding promoting and implementing the 'learning culture' in these practices. Ward based nurses are held responsible for individual patients developing pressure ulcers and do some of the prevention work such as risk assessments, although many of the prevention activities are delegated to healthcare assistants. They check patients' skin for signs of ulcer development during washing, help patients reposition, keep the skin clean if the patient is incontinent, and might notice equipment used for pressure ulcer prevention such as mattresses malfunctioning. When healthcare assistants notice signs of pressure damage on a patient's skin, they need to notify the ward nurse in charge of the patient. Healthcare assistants and ward based nurses are under a lot of pressure, for instance, time pressures due to staff shortages[22], so pressure ulcer prevention practices are one of the many care practices about which they have to decide whether to prioritise them that day or not.

Nurses in managerial roles, such as ward managers, matrons, and directors of nursing, rather than carrying responsibility for pressure ulcer prevention for a small group of patients, are responsible at the ward-level, hospital-level, and Trust-level. Although they do some of this work with patients, they mostly concentrate on making sure ward staff can do their jobs, and that the

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[21] I have been inspired by other hospital and care ethnographies, such as Livingston 2012, Mol 2006, and Latimer 2000.

[22] See Chapter 1 for more on this.

targets are met. If pressure ulcer incidence increases, it is their job to investigate why, and put measures in place to reduce the numbers again, such as arranging further training for the nursing staff and healthcare assistants. In this way, managerial nurses are tasked with implementing the ‘culture of learning’. This is apparent when managerial nurses investigate particular pressure ulcers that have developed on their ward; they look into what caused them and what can be learned to prevent potential future occurrences. They discuss these investigations in weekly multidisciplinary meetings. A managerial nurse, whom I will call Lorraine, and I were chatting when she told me that her intention is that meetings are geared towards learning, not telling off nursing staff. They are about finding out what happened and sharing lessons learned.[23]

During a different conversation about these meetings, Emilia, also a managerial nurse, explained that for learning to happen it is important to create a safe environment for staff to communicate openly about mistakes they made. One of the things she does to ensure this is praise nursing staff and healthcare assistants when she can;

> *It’s not blaming the staff for anything. Because if they found a pressure sore: Hats off to them! They are reporting something that is not going so well, so let’s try to think all together.*[24]

In addition to encouraging staff to communicate their mistakes, Emilia also avoids shaming them in front of the rest of the team. She asks everyone to be reflective about their own potential contribution to a pressure ulcer developing. She described one investigation, in which it was very clear what had led to the pressure damage on the patient’s skin; the patient had been left sitting on a chair for a whole day. She said the nurse, in whose care the patient was that day, should have helped them back to bed a couple of times to rest their skin.

> *The worst part is that actually the nursing assistant said to the nurse: Shouldn’t we change the pad of that patient? Shouldn’t we put them back to bed? And the nurse said: Oh but they are so comfortable in the chair! Actually, the patient was very comfortable in the chair, but that’s the reason we are there! Is to sometimes say, you know, (…) Shall we go to bed to relax your back? (…) It’s having that negotiation, isn’t it?*

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[23] See paper 2 about prevention and uncertainty for more on the conceptualisation of prevention in these meetings.

[24] Most of my data are observation-based, meaning I do not always have exact quotes of what was said. In this paper I indicate both interview and observation data in italics.

The nurse blamed herself for the pressure ulcer and she wrote an elaborate reflection on the importance of shifting the pressure on the skin. Emilia told her:

> *I don't want to blame you. I don't want to shame you in front of the team. (…) For me it's so important that you are reflecting on what you did and the consequences of what you did. Because I know you have the best intention of the world, however, the best intention just didn't work so well in the end.*

Emilia explained how she does not blame the nurse, but tries to create an environment in which the nurse and her colleagues reflect on their potential contribution when a pressure ulcer is found. She wants them to feel they can tell her about their mistakes and take accountability for them. In the case of the nurse who wrote the reflection this was demonstrated by her apology to the patient, and her tears when she cried.

However, blame is sometimes wrapped up in an accountability narrative despite the managerial nurses' efforts. This blame is hidden from view for most people both because it takes place in private spaces. The crying nurse probably felt guilty and blamed herself; and other nurses told me about having sleepless nights over pressure ulcers that developed in patients under their care. Other than this self-blame, there are also narratives of blame from managerial nurses about those working directly on a ward. During an interview with managerial nurse Jeanette in a private office, she told me that in the hospital she previously worked at she had never seen a category four pressure ulcer. A grade two pressure ulcer on your patient in that hospital, meant you were considered *the worst nurse ever* and you would feel very guilty. She contrasted this with the high number of pressure ulcers developing in Hospital B, telling me she does not believe in the concept of 'unavoidable pressure ulcers'. She is frustrated with how this concept is being used by managerial and ward nurses, interpreting it as a strategy to escape accountability. She implies that nurses should feel more guilty, because they could have, and should have, prevented the pressure ulcers.

Reports promoting a move away from a 'culture of blame' and building a 'culture of learning' imply that they are opposites on the same continuum, and that moving towards one automatically moves one away from the other. In practice, learning and blame co-exist in parallel. Blame and learning surface in different circumstances. Creating a learning environment is referred to in circumstances of making nursing staff feel safe to share mistakes. However, when nurses are thought to behave in an evasive or passive way, rather than taking accountability by proactively analysing their mistakes, narratives of shame and blame emerge.

Reproducing responsibility

If blame and learning co-exist in NHS pressure ulcer care, how to relate to the policies designed to replace the former with the latter? At times tissue viability nurses reproduce the idea that nurses should carry this responsibility, but at other times they resist it. In contrast to ward and managerial nurses, tissue viability nurses work across the hospital. Their activities vary, but are usually a mixture of training other staff about pressure ulcer prevention, arranging medical devices to be used in hospital for pressure ulcer prevention and care, and seeing patients with severe pressure ulcers and other types of wounds to provide advice about how to manage them. The stakes of pressure ulcer prevention are high, and they have to navigate multiple responsibilities in the ambiguous space between a 'culture of blame' and the 'culture of learning'. In the following, I will first show how they reproduce the responsibility and in the next section I will explain how they resist it.

The prevailing language about pressure ulcer prevention techniques in NHS hospitals consists of assessing patients' skin and the risk for pressure ulcer development for each patient in a timely manner, implementing a care plan from the results, regularly checking the skin and updating the care plan if anything changes. Preventive care usually consists of evaluating the appropriate surfaces for the patient to be sitting and lying on (e.g. mattresses and cushions), making sure the patient is kept dry and clean if they are incontinent or sweaty, assessing their dietary needs, and informing the patient and their carer of pressure ulcer risks (NHS Improvement 2018^{A}, 5-6). Helping patients reposition and move regularly is considered the most important intervention to prevent ulcers, because it shortens the time pressure can build up on a particular area of skin. Nurses are responsible for these practices because they are thought to be in their realm of control. But on different occasions, tissue viability nurses told me that pressure ulcer prevention consists of so much more than these practices. Many other people and things can contribute to pressure ulcer development, such as; patients' nutrition, mental health, and social support network. While tissue viability nurses know this, they also, often unwittingly, reproduce the idea that nurses have control over pressure ulcer prevention in their language and narratives about how pressure ulcers develop, the causes, and risks.

During a long conversation with Barbara, an experienced tissue viability nurse, she reproduced some of these ideas. When I asked her about how she had seen wound care change over time, she said:

> *Well, the fundamentals of it, in many respects, haven't changed. The fact that you need to relieve the pressure by moving the patient has not changed at all. In fact, people that nursed*

> *pre-war and in the war would tell you that actually a pressure ulcer in those days was thought to be a sign of shame that a patient acquired a pressure ulcer. They repositioned patients very frequently and that was all they could do because there was very little redistributing equipment. (…) But the fundamentals of repositioning haven't changed particularly. If you sit in the same position for a long time, ultimately the pressure between the bone and the surface will squash the skin and the tissue in between and the cells will die.*

While Barbara could have pointed out the many other things that contribute to a pressure ulcer developing, she explains that fundamentally pressure ulcers are caused by pressure on the skin and that nurses' role is to alternate the pressure by helping patients reposition, or by using different medical devices that help to do this. These are all things within nurses' realm of control and responsibility.

The idea that pressure ulcers develop primarily as a result of pressure on the skin is also reproduced in trainings and teaching sessions about pressure ulcers. When tissue viability nurse Amanda taught nurses and healthcare assistants prevention, for instance, she distinguished between *causes* for pressure ulcers and *factors* that contribute to it. She invited the nurses and healthcare assistants attending to practice what they learned with a picture of a patient who has both moisture-associated skin damage as well as an ungradable pressure ulcer. She explained that sustained pressure caused the pressure ulcer to develop, but the patient's immobility, and body type (such as being very skinny or obese) can contribute to being at risk. The cause of sustained pressure is something ward nurses are deemed able to prevent, but the contributing risk factors are framed as being outside of their domain, they cannot prevent someone from becoming obese, or developing diabetes. This distinction reproduces the idea that nurses should nevertheless be held accountable when a pressure ulcer develops, that most ulcers can be avoided, and that they are the result of mistakes.

In reproducing this narrative, Barbara and Amanda are showing what they and their ward nurse colleagues have control over. Having heard this perspective several times, I started to wonder if every ulcer really was avoidable and if any part of pressure ulcer development was outside of nurses' control. I asked Sonia whether she thought there was also an element of chance or bad luck when it comes to pressure ulcer development; whether the odds can be stacked against nurses. She explains:

> *You can't think about it! You can't say that, no. You've lost the essence of what you're trying to achieve, I suppose. It doesn't sound robust or professional or (…) accountable.*

Sonia explains that referring to luck or chance would not come across as professional. Reproducing the narrative of control is a way to protect nurses' professionality.

After a tissue viability team meeting, during which Sonia told the team that she coincidentally found a mattress pump that had been left unplugged, we sit down and talk about it some more. The special mattress normally helps move the pressure on patients' skin through pumping air into it, but the pump's battery was not charged, leaving the mattress deflated and the patient lying on a hard surface. This contributed to several serious pressure ulcers developing. Sonia explains that several obvious signs were missed by the ward staff; the plug hung over the pump which should make it obvious to staff that it was not plugged in, and the patient had already been uncomfortable for a couple of days. She says she was livid, but tried to stay collected to not scare the ward nurses. But she wanted to make sure they knew how serious the situation was. They all responded *It wasn't me*, she tells me in a frustrated voice. She tried to get the point across in a way that would keep the ward staff engaged, and not in an authoritarian way. But it was difficult because it made her feel cross, because they are preventable and have such serious consequences. She then softens her tone and empathises a little with the ward, because they had lots of new staff who still needed training and were getting used to things. They were largely unprepared, and there was a lot of pressure on them to get everything right immediately.

Sonia reproduces the idea that the ward nurses carry the responsibility, in this case by making sure the equipment is used correctly, and by taking action if a patient says they are uncomfortable. At the same time, this interaction also shows how ward nurses can resist by responding with *It wasn't me.* In the next section I will go more deeply into how nurses resist the responsibility for pressure ulcer prevention.

Resisting responsibility

In the previous section I showed how tissue viability nurses often reproduce the idea that nurses should carry responsibility for pressure ulcer prevention. In other instances, the same tissue viability nurses resist the idea that they and ward nurses should carry all the responsibility. Sonia, for instance, does so during the trainings that she gives across Hospital B during which she emphasises that *It's not just a nursing issue*. She explains that everybody needs to know how significant a pressure ulcer's impact is on patients. Everybody needs to be involved and work together to reduce the incidence in the hospital. She explained to me what she meant by this:

> *I think it's unspoken, isn't it? The odds are always stacked against us.* She laughs. *It's a perfect storm scenario, really, isn't it? Shortage of staff, lack of knowledge, new staff, competency levels, skill mix. It's so complicated. There are so many different layers, that yeah, unfortunately it just comes together. Or there is one person that does not plug the mattress in and nobody notices and that is, what is that?*

Sonia describes a broad network of events, things, and people that can contribute to pressure ulcer development across time and space. This makes it unclear where the responsibility should lie, and whether bad luck might be playing a part.

Another day, she and I are sitting in a small meeting room that is always stuffy and hot. No one ever gets around to reporting that the air conditioner needs to be repaired. We are in between two meetings that we are attending online on her phone, because the computer is not working again. The first meeting left her feeling frustrated, and while we are waiting for the next one to start we chat. She says she is so done with the mechanical side of nursing, like putting dressings on wounds.

> *Because it's 'pointless! We're just treating the symptoms, not the actual problem. We got it all wrong here in hospital! We see the body as mechanical and obsess over how to fix that, but really wounds, pressure ulcers, are often caused by our trauma responses such as gambling, starving ourselves, overeating, etc. That's what I would like to treat, not putting dressings on them.*

Sonia explains her frustration is because her job is at the end of a line of events and mistakes that she has no control over. It is as if she is firefighting while someone else is pouring fuel on the fire - and yet she is being held accountable for putting it out. She is frustrated that the core problems are never being addressed.

Nurse Jessy, who worked in a different hospital, in a ward with many patients with pressure ulcers, made a similar point. She explained how nurses cannot be held solely responsible for pressure ulcer prevention because a lot is out of their control. During our conversation she mentions that patients also need to take good care of themselves. I ask her to elaborate:

> *I mean that they are sent home with a regime of lying flat in bed with once a day four hours in their chair or twice a day three hours. However, many people have mental health problems. They struggle with addiction and have social problems. They don't clean their skin*

> *properly and might spend a long time in the same position. One patient recently passed out on the radiator and didn't feel it because of his spinal injury. (…) We make jokes with our patients. One of our patients, for example, returns to our ward every Christmas and when he is discharged we jokingly tell him: See you next year! He always says we won't see him again next year, but he's always back at Christmas. So pressure ulcers commonly occur in people with mental health problems or who do not accept carers. They don't rest their skin properly, which is frustrating. We don't have funding on the ward to have psychological support for their mental health.*

Like Sonia, Jessy also resists the idea that they, and their nurse colleagues, can be held completely responsible for pressure ulcer prevention and accountable when one develops. They do so, for example, by arguing that their scope of control is limited by their working environment, such as by staffing shortages and things beyond the hospital (e.g. poverty, malnourishment, limited social care).

In this highly pressured environment, the reproduction of narratives of pressure ulcer prevention being the responsibility of nurses moves back and forth on an axis ranging from individual defensiveness to collective resistance. Introducing the idea that there might be an element of bad luck involved in pressure ulcers developing serves to protect an individual's sense of professional identity, career, and accountability. It is a response from a place of fear of blame, and is usually expressed only within the team. Collective resistance is more external, when teams point out there are many causes for pressure ulcers, such as diabetes, mental health problems, and obesity, which are out of their remit of control. In the next section, I will reflect on this confusing placement of responsibility by going back to the policy reports on the cultures of blame and learning.

Learning collectively, blaming individually

In the reports about the NHS that promote improving patient safety by moving from a 'culture of blame' to a 'culture of learning', the choice of the word 'culture' is a curious one. By choosing this concept, the authors of the reports create a vagueness about where the responsibility lies. Is a culture, for instance, made up of individuals who can change it, or is a culture something collective that transcends the individual level?

The move to a 'culture of learning' is an attempt at dispersing responsibility; acknowledging that matters of safety amongst members of staff contribute to the safety of the overall care provided. However, the use of the concept of 'culture' serves to hide how this responsibility is exactly assigned.

This vagueness is also present in the argument that in the ‘culture of learning’ the policing of individual responsibility should not be completely abandoned. The report ‘An organisation with a memory’, for instance, states; ‘It is of course right, in health care as in any other field, that individuals must sometimes be held to account for their actions – in particular if there is evidence of gross negligence or recklessness, or of criminal behaviour. Yet in the great majority of cases, the causes of serious failures stretch far beyond the actions of the individuals immediately involved’ (Department of Health 2000, viii-ix).’ The text marginalises policing and blaming happening through the Coroner’s Court, litigation, and other forms of punishments for practices deemed unnecessarily risky, or harmful in health care. It argues that while these may be occasions when this type of blame is appropriate, it is different from the ‘culture of blame’.

In practice, however, policing and blaming for mistakes in pressure ulcer care is not marginal, but integrated into everyday practice. For example, in the language used in safeguarding, which is about protecting patients. Since most pressure ulcers are considered an avoidable harm, safeguarding categorises them as a form of ‘abuse’ caused by ‘neglect’. These phrases imply a victim, and a perpetrator. In the existing structure of the NHS, this perpetrator is usually the nurse. However, in trying to steer clear of a ‘culture of blame’ it uses language that is less directly focused on blaming individuals, and directing attention towards a retrospective potential of how things could have been.

Another example of how forms of blame and policing are being incorporated into pressure ulcer care came up during an interview with Sonia. We were talking about a Coroner’s Court case she was advising on, and I asked her whether she ever worries about legal consequences:

> *Always! Always! Always! Always! In your training it is drilled into you with your documentation and Nursing and Midwifery Council registration. That anxiety is constantly driving the level of standard that you’re trying to achieve. Absolutely. (…) I always meet every single patient with that idea in mind; that this is the potential; losing my pin number and my career.*

The threat of being individually summoned to the Coroner’s Court shapes Sonia’s practice and experience of her work constantly. But it clearly also generates ongoing stress for her.

These two examples show how individualised blame remains silently embedded into everyday practice. Tissue viability nurses need to navigate the ambiguous landscape of a ‘culture of learning’ that promises a more dispersed conceptualisation and practice of safety, while being individually under threat of such systems as the Coroner’s Court. The policies present these types of policing and blame as a last resort, which actually makes people feel more fearful. By downplaying these types of blame as marginal occurrences, the policies themselves could be said to actually reproduce old systems of power and responsibility.

Discussion: Advocating various values

In this paper I have described how a series of incidences of patient harm in the NHS around the end of twentieth century resulted in public mistrust. In response, several reports were published that focussed on promoting patient safety through a move away from a ‘culture of blame’ to a ‘culture of learning’. In the proposed ‘culture of learning’, staff should feel safe and supported to share mistakes openly, so that learning can take place and they can be prevented in the future.

Since the publication of these reports a lot of work has been done to implement changes (see, for example, Department of Health 2015). Graham, Stanford, and Dixon-Woods (2023) reviewed the progress since 2013 and argue that some recommendations from the Francis and Berwick reports have not been implemented as successfully as others. They argue the ‘culture of blame’ seems to be stubborn and hard to move away from (see also, Dixon-Wood 2022).

Whilst I observed this trend in Hospital B’s pressure ulcer care, I also saw practices in line with both a ‘culture of learning’ as well as ‘the culture of blame’. Pressure ulcer incidence became one of the core indicators of quality of care and patient safety, and nurses are held responsible for their prevention. But the nurses have to navigate an ambiguous landscape; on the one hand, pressure ulcers are deemed mistakes that should be avoided, and for which they can be individually blamed; and, on the other, they are encouraged to communicate openly about any mistakes so collective learning can take place to prevent similar events from happening in the future.

The certificates and whiteboards on the ward corridor walls saying *It has been … day(s) since a pressure ulcer was acquired on this ward* are an example of this ambiguity. They were designed with the idea that they would promote good practice by celebrating positive results and the sharing of methods that were effective. They embody the ‘culture of learning’ ideals of transparency, accountability, and learning from mistakes. However, at the same time, like all numbers and categories, they only represent one side of the story, making other sides invisible (see, for example, Bowker and Star 1999, and for a critical analysis of what different strategies of counting make visible and invisible in the context of pressure ulcers, see, Fletcher, Jacklin, Adderly 2021, 15). While most nurses I asked about the whiteboard were not interested in talking about it, managerial nurse Margaret had strong opinions. She said the certificates and whiteboards are disheartening to staff because they make invisible the hard work of pressure ulcer prevention that is done, and the difference between various patient groups' needs and abilities. An elderly care ward, for instance, will have more patients at risk of developing a pressure ulcer than most other wards, and more work will be needed to help them reposition. Additionally, the moment a new pressure ulcer is acquired, the board goes back to *It has been 0 day(s) since a pressure ulcer was acquired on this ward,* and all hard work is literally erased. While trying to promote a culture of learning, having a single number on the board masks the differences across wards, and changes over time. The sentence shows how blame and learning can be folded together into an apparently neutral metric.

Tissue viability nurses and managerial nurses navigate this ambiguity, while juggling the high and multiple stakes they have in pressure ulcer prevention. Not only is their patients' skin integrity and wellbeing on the line, but also the reputation of the Trust, and the nurses' own professional identity and personal career. Similar to the skin being the somewhat permeable border between the inner body and the outside world, managerial and tissue viability nurses embody the flexible boundary between the internal events in the hospital and the external policies and standing of the Trust. They have to advocate different values and interests at different times: skin, patients, ward nurses, and policies. It is their role to direct these different narratives and actors in the post-Francis report landscape. As significant and good as the shift to learning might seem, the fact that it does not eliminate individualised blame makes it questionable how staff are meant to function, who and what they are meant to protect, and how to maintain a clear identity.

These tensions are unsurprising when unspecific concepts like 'culture' are used in influential reports and policies. Similar to the obscurity of where the responsibility for changing culture lies in Jensen's analysis of the American healthcare system, the key NHS policy reports leave the concept of 'culture' open to interpretation. While promoting 'learning culture' seems to be an attempt at dispersing responsibility, it obscures exactly how responsibility might be dispersed. As Jensen points out, there is a contradiction in combining culture and individual responsibility.

Many other professionals in similarly complex roles also have to advocate for many different values that sometimes clash. While these practices of balancing multiple contrasting values and interests are not unique to this setting, this case of managerial nurses and tissue viability nurses having to deliver pressure ulcer care is a particularly illuminating example because of the increasing pressures placed on them that so often go unnoticed.

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Chapter 4: Paper 2: ‘Slight evidence of avoidability’: Speculative temporalities in pressure ulcer prevention in the National Health Service in the UK

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Paper 2: ‘Slight evidence of avoidability’: Speculative temporalities in pressure ulcer prevention in the National Health Service in the UK

Abstract

At present, there is a strong emphasis on pressure ulcer prevention in the United Kingdom’s National Health Service (NHS); their incidence is used as an indicator of the quality of care and patient safety. A wide network of people and things are involved in preventing pressure ulcers, and many factors contribute to their development. Pressure ulcers develop over time, often with a delay between pressure on the skin and an ulcer showing or being spotted for the first time. Consequentially, it is not always clear what particular actions or inactions caused the ulcer to develop, and therefore what preventive actions actually work or not.

In this paper I unpack the prevention practices of a multidisciplinary hospital team that meets on a weekly basis with the aim of reducing the incidence of hospital acquired pressure ulcers. I argue that hospital staff’s practices of navigating the uncertainty surrounding prevention effectiveness are based on a temporal rationale that assesses the past (I call this retrospective speculation), in order to anticipate and intervene on the future, and to prevent events such as pressure ulcers developing in the present.

I analyse what this shows us about prevention as a ‘future-orientation’ (Bryant and Knight 2019). I find that in being faced with the challenge of uncertainty in prevention, the team imagines temporally parallel routes. On one of these, no hospital acquired pressure ulcer develops, but on the others it does. For the imagined route on which no pressure ulcer develops, it has been prevented, interventions have been put in place, good care delivered, and the patient kept safe. This conceptualisation of successful prevention is key, endorsing the idea that staff can prevent pressure ulcers as long as the right decisions are made, and appropriate actions are taken. In doing so, prevention is a folding of past and future into present practices.

‘Slight evidence of avoidability’: Speculative temporalities in pressure ulcer prevention in the National Health Service in the UK

Irina and I are sitting in Hospital B’s[25] staff canteen.[26] She is a tissue viability nurse, a nurse specialising in wound care. I have been shadowing Irina and her colleagues for the past few months and we have had many chats over lunch and in between work. Today, we planned to sit down together and have a longer interview. High numbers of new referrals and patient visits that lasted longer than expected meant we had to reschedule a couple of times. We are both happy to finally be able to sit down and have a proper chat.

It is after lunch and the restaurant is empty except for a handful of people sitting alone here and there, most of whom are looking at their phone. A young man who works in the canteen is wiping tables clean and pushing chairs back under them. A loud scraping noise escapes every time he moves a chair, and it bothers Irina every now and then. A more joyful interruption comes about halfway through our interview when a pigeon walks into the indoor space and we wonder whether it will be able to find its way back out.

As we sit opposite each other we talk about pressure ulcer prevention[27]. Pressure ulcers, also referred to as pressure injuries, pressure sores, or bed sores, are injuries caused by sustained pressure on skin, particularly areas that cover a bone, like the hip, heel, or the back of the head. The pressure leads to a reduction of blood flow in the skin, causing the cells that make up the tissue to die. People living with poor health, for example people that suffer from diabetes, vascular disease, or mental health problems[28] are at increased risk of developing pressure ulcers (I reflect on this narrative around causes of pressure ulcers in paper 1 about blame, learning, and responsibility).

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[25] The names used in this article are pseudonyms to protect interlocutors’ anonymity, including Hospital B.

[26] I chose to write fieldnotes in the ‘ethnographic present’ (Fabian 1983, 80). This was a stylistic choice that compels the reader to feel present along with myself as a researcher in the field. I do not aim to mimic objectivity with this style. I make regular reference to specific moments in time to make it clear that I do not want the text to be read as though it were ‘out of time’.

[27] The concepts of pressure ulcer prevention, pressure ulcer treatment, pressure ulcer management, and pressure ulcer care overlap in meaning. Pressure ulcer treatment can mean using creams, dressings, and technologies like pressure redistributing mattresses to promote healing of a pressure ulcer, but these practices also prevent the pressure ulcer from deteriorating and new pressure ulcers from developing. Pressure ulcer care and prevention, however, encompass more than pressure ulcer treatment and management. In my use of the concepts, the former include a wider array of practices that aim towards improvement of pressure ulcer outcomes, such as staff trainings on pressure ulcer prevention, and multidisciplinary meetings to investigate pressure ulcers. Pressure ulcer treatment and management, by contrast, refer to practices more directly related to specific pressure ulcers on individual patients.

[28] Throughout my fieldwork tissue viability nurses pointed to the link between mental health issues and pressure ulcers. They argued people are more vulnerable to developing pressure ulcers if they do not take good care of themselves, for example by not eating well, keeping their skin clean, and moving their body. Their rationale follows that mental health problems often cause people not to be able to take good care of these

Irina and her tissue viability colleagues spend the majority of their time either taking care of patients with pressure ulcers, or advising and training other staff how to care for and prevent pressure ulcers. I offer my own observation of this work to Irina: *I think that's the difficulty with pressure ulcers because you're trying to prevent something that does not exist yet. (…) This makes it difficult to prioritise and get the urgency that is needed.*[29] She agrees:

> *Yes, and also patients tend to be unwell a lot of the time and so other things are more acute to take care of. And of course, you do not want them to get a pressure ulcer on their heels, but you want them to have the operation they need, for which they need to be on the table for eight hours.*

The hypothetical patient Irina refers to is at risk of developing pressure ulcers on their heels during surgery because they would be lying on their back. This would be risky. Irina explains that sometimes the practice of pressure ulcer prevention by redistributing pressure building up on one place on the skin is not in line with patients' other health needs, such as when they need a long operation. She continues: *And as you say; you don't see a 'result,' when a patient has not developed a pressure ulcer after six months.* She refers to the invisibility of successful prevention; an absence of damage to the skin.

The avoidable nature of pressure ulcers dominates thinking within the United Kingdom's National Health Service (NHS). I ask Irina whether she thinks unavoidable pressure ulcers exist.

> *I think rarely. I think it can happen with very compromised vascular disease or very compromised skin or very acute problems with the liver, or something very, very difficult. But even in those cases it could have been avoidable. (…) You look at the patient and you think, yes for sure he is going to have a pressure ulcer. Probably, possibly! But I still think or feel in many of the cases we could have done better as well.*

I ask her to expand on her answer:

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things. Additionally, it is often linked to social isolation, and therefore lack of support in making sure care happens.

[29] Most of my data are observation-based, meaning I do not always have exact quotes of what was said. In this paper I indicate both interview and observation data in italics.

> *Do you know in advance sometimes that a pressure ulcer is unavoidable? This patient will develop a pressure ulcer, it is unavoidable, or is it always retrospective where you think this pressure ulcer was unavoidable?*

She responds:

> *I think it's more to do with whether we did everything that was in our power (…) to avoid it, rather than whether it could have not happened. If you have everything put in place in time, that means it couldn't have been avoided with the means you have at that time. (…) I think it's more to do with that than saying for sure he would have had it in any circumstances.*

Irina explains that even if it was likely that a patient will develop a pressure ulcer, she still thinks more could probably have been done to prevent it from happening. Determining whether the pressure ulcer was avoidable, she explains, is about determining what was possible in the particular circumstances at that time, and whether everything possible in those circumstances was done. This makes me wonder what is considered circumstantial and what is a direct cause for a pressure ulcer. Who decides this and how? What do the categories of avoidable and unavoidable mean, and what work do they do in the context of pressure ulcer prevention?

Irina's reflections demonstrate that while nurses believe most pressure ulcers can be avoided, there remains inherent uncertainty in their work – pressure ulcers can still develop. Many people and things can be involved, with many factors contributing to ulcer development. Additionally, pressure ulcers develop over time, often with a delay between the pressure on the skin and the ulcer showing or being spotted for the first time. This makes it hard to know exactly what caused a pressure ulcer and when. It is not always clear what particular actions or inactions caused a pressure ulcer to develop or prevented it from developing. The desired result, of course, is a pressure ulcer not developing. But absence is hard to measure; as Irina explains, it is not a 'result' when a patient has not developed a pressure ulcer. And it is impossible to know what might have happened if things had gone differently. This uncertainty around the avoidability of pressure ulcers sits in uncomfortable tension with Hospital B's aim to become a 'zero avoidable harm organisation'. This echoes similar absolute aims to stop avoidable harms taken up by other hospitals and reflected in campaigns like the 'Harm Free Care Strategy' (NELFT n.d.).

I followed the concept and practice of pressure ulcer prevention and care around Hospital B across the variety of spaces in which it materialises; offices, beds, the staff restaurant, floors, wards, posters, emails, and online meeting spaces. Here, I focus mostly on the work done during the weekly team meetings I attended over two and a half years. Most of these took place online because of the Covid-19 pandemic. My argument is also based on my ethnographic work in the hospital over nine months shadowing a variety of staff. Furthermore, I interviewed nurses and staff involved in pressure ulcer prevention such as healthcare assistants, ward managers, tissue viability nurses, quality governance staff, occupational therapists, dieticians, recruitment staff, and more. I additionally followed relevant activities outside Hospital B, attending study days and conferences, and interviewing employees of companies producing medical devices used in pressure ulcer prevention and care.

This paper unpacks the paradox that avoidable pressure ulcers nevertheless still happen and demonstrates how the specialist team tries to control this ambiguity. Their way of making sense of this emerges through the team's work articulating, working through, and managing the impossibility that pressure ulcers are preventable. I draw inspiration from Jerak-Zuiderent's (2012) ethnography of how Dutch primary care approaches patient safety and its efforts to control uncertainty around errors. She points out how the move towards the concept of patient safety frames safety as the absence of mistakes, but that this perpetuates what can be called the 'machine paradigm' (Prigogine and Stengers 1984, xiii, as cited in Jerak-Zuiderent 2012, 745-746). Both assume predictability and control, and leave no space for chance or luck. I observed similar thinking and practices in my fieldwork. But this was intertwined with a strong temporal approach to the team's sense-making practices around pressure ulcer avoidability. I borrow Bryant and Knight's (2019) concept of 'future-orientation' to highlight this temporal dimension. The concept helps to make visible the underlying assumptions and tensions in prevention. In combination, I analyse the team's practices of sense-making of pressure ulcer prevention as a way of letting the 'desired future' (Lemos Dekker 2020) of zero avoidable pressure ulcers orient the present (Bryant and Knight 2019, 16-17). I also highlight the team's values (for more on this approach, see Mol, Moser, and Pols 2010) as a further way to understand the team's assumed temporal worldview of the prevention.

Present uncertainties: What happens in the meetings?

The meetings have been set up according to the logic that by examining the past the information collected can be used to predict, intervene on, and prevent events such as pressure ulcers developing in the future. The meetings start with an examination of the past; an investigation of the pressure ulcer and how it came to be. The team then moves into the future by asking how to prevent this from happening again. In my description and analysis of the meetings below I follow the same structure; I start with a description of the meetings (the present), move into their investigation (the past), and end with their planning for the future. I weave in an analysis of how the team tries to create certainty in prevention within each of these steps.

The meetings are a quality improvement initiative set up between the director of nursing and the quality governance team to carve out time to investigate and learn from what they call ‘hospital acquired pressure ulcers’. These are ones that either developed in hospital or that a patient came in with but that deteriorated in hospital. In this categorisation, all pressure ulcers are divided into either hospital acquired or community acquired, which has consequences for who carries responsibility and is therefore deemed accountable. Pressure ulcers are categorised based on severity, ranging from one to four, with a fifth non-numerical category described ‘deep tissue injuries,’ and a sixth as ‘unstageable pressure ulcers’. The meetings focus on the more severe categories of pressure ulcers; category three, and four, deep tissue injuries, and cases of patients who have multiple pressure ulcers, even if they are category one or two.

The team aims to reduce incidence by investigating each hospital acquired pressure ulcer, making sure the documentation and reporting has been done according to procedure, that safeguarding has been raised if appropriate, and, most importantly, by learning from what has happened in the past to prevent it from happening again in the future. These learnings are aimed at the specific ward in which the pressure ulcer developed, but the team also aims to identify broader problems and intervene across wards and at a hospital- or Trust-level.

Before the pandemic the team would come together in a small office, sitting around an oval table. Since the start of the pandemic, the meetings take place in a virtual space; every member of the team joining from their own computer in their home or an office somewhere in the hospital building. Unreliable internet connections, microphones, and cameras transport sound and visuals of varying quality, sometimes making it hard to follow what is said. Members of the team log in and out of the meeting and it is not unusual for one of them to say they have come straight from another online meeting or have to go straight into one afterwards. In more extreme cases, they may even attend two online meetings at the same time.

The team is multidisciplinary but is led by managerial nurses[30] and the quality governance team. Two members of the tissue viability team always attend, as well as the lead for therapies, and a safeguarding advisor. The core team tries to attend the meeting every week, while others dial in and out; the meeting is open for any member of staff to attend. The core team welcomes as many

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[30] I use ‘managerial nurses’ to describe nurses in managerial roles, such as ward managers, matrons, and directors of nursing. Since only a few nurses work in each of these roles, grouping them into one collective protects interlocutor’s anonymity.

attendees as possible in order to raise awareness, keeping in mind staff tend not to have much time because of the pressures they are under, due to staff shortages and high workloads.

Before a meeting starts, someone from the quality governance team sends out an agenda. The meetings begin with small talk, often about one of the team members' choice of virtual background of a fancy looking house or tropical beach. We laugh about it. The panel lead starts by going over last week's meeting minutes to see if anyone wants any corrections and to review the action log. This lists the plans that have been accumulated during past meetings and deadlines for when they need to be completed. Team members update each other on any progress that has been made and decide whether it can be crossed off the list or needs to be postponed. One of the tissue viability nurses then presents last week's numbers of hospital acquired pressure ulcers per category, and the team remark on unusual developments or things they need to look into further.

Uncertainty

There is uncertainty in pressure ulcer prevention. Pressure ulcers are a type of chronic wound, because their healing process can be long and complex, stagnating, and moving back and forth (Frykberg and Banks 2015). Pressure ulcers have a wide variety of effects on people's lives. They can be extremely painful and can cause social isolation due to malodour, if they get infected. People can live with pressure ulcers for years, and in severe cases, can result in an infection of the bone and even result in death. Sometimes, by contrast, they heal in a matter of weeks.

This uncertainty is navigated using a variety of techniques. In a healthcare environment, preventing pressure ulcers requires vigilance in routine care, such as visually and manually checking patients' skin, making sure the mattress or cushion they are lying or sitting on is suitable, performing risk assessments, keeping patients hydrated, managing incontinence by keeping them dry and clean, and keeping them moving or helping them reposition if their mobility has been impaired. Many different people and things are involved in these tasks, such as physiotherapists, tissue viability nurses, healthcare assistants, patients, matrons, risk assessment templates, dressings, and mattresses.

During an interview, Stacey, a member of the quality governance team and the multidisciplinary team, explains that investigating pressure ulcers is different from investigating other incidents:

> *The process side of it (…) is very different with pressure ulcers. With other instances there is normally a specific point in time, but with pressure ulcers it's less clear (…). With pressure ulcers you'll find that you're reviewing the entirety around somebody's care and pressure ulcer prevention and sometimes that can be over months. It's more difficult to pinpoint a time and person.*

She explains the distributed nature of activities involving many people and things, and the fact that pressure damage may have been building up over a long period of time.

An example of just how many factors can be at play is described in the following composite case:

An underweight diabetic elderly patient waits in the accidents and emergency room for ten hours while sitting on a hard plastic chair. He is unable to get up regularly to relieve the pressure on the skin of his sacrum due to his mobility problems and his is particularly vulnerable to pressure damage because of his poor health. His skin is not checked by the staff in the accidents and emergency room because they are under pressure to discharge or admit patients quickly, driven by the rising waiting times in their department. When the patient is eventually admitted to the ward at 3 am, the staffing shortage means that staff are kept busy making sure all patients get their medication. Furthermore, a patient with dementia is interrupting other patients' sleep so they have to keep her under one-on-one supervision. The ward staff arranges for the patient from the accident and emergency room to sleep on a pressure redistributing air mattress. He is feeling discomfort on their lower back but does not want to tell the staff who already seemed to be under so much pressure. They do not want to reposition him because he is feeling dizzy. The healthcare assistant assigned to take care of the patient is relatively new to the job, and unaware of different ways they can explain why it is important to move every few hours.

There is a multitude of potentially harmful influences that could have contributed to the development of the pressure ulcer, either because it meant prolonged pressure on the skin, or because damage to the skin was not noticed and acted upon as early as it could have been. These, and many other unrecorded events, could have contributed to this patient's sacral grade three pressure ulcer that was found by the healthcare assistant the next day while he was giving the patient their daily wash. It can never be known exactly when the pressure ulcer started or how long the delay was between the pressure on the skin and the pressure ulcer showing or having been noticed. This composite case shows only a fraction of the multiple and various actors that potentially contribute to pressure ulcer development, and can therefore be included in pressure ulcer prevention.

Later on in our conversation, Stacey explains how this distributed nature of pressure ulcer development creates uncertainty around its avoidability.

> *If you've got a patient who's come in, [then] they've had an assessment done. [But] the risk assessment wasn't accurate. It meant that one or two things didn't happen. But then you've got, this patient is diabetic, they're end-of-life, they're vascular, and you've got all of those other things that will have contributed to the development. So if you then took away the one thing or two things that we didn't do. It's likely they still would've ended up with a pressure ulcer. That's when it gets difficult. That's when you get that tension of: Did we? Didn't we?*

She explains here that it is not always clear what particular actions or inactions caused a pressure ulcer to develop, making it difficult to determine whether it was avoidable or not.

Uncertainty is consequently inherent to prevention because it is impossible to know with certainty how things could have gone differently. How does the team attempt to create certainty in this uncertainty? And how does the team make sense of avoidable pressure ulcers developing? They do so by examining the past and drawing lessons from that to apply to the future.

The past: Investigation and imagination

After the first segment of every meeting in which the minutes, action plan, and last week's hospital acquired pressure ulcer data are discussed, the main part of the meeting commences. The team dive into the past, listening to presentations about investigations of pressure ulcers. They might wait a couple of minutes if the presenter is running late; someone in the team usually tries to reach them to remind them of the meeting and ask them if they are dialling in soon. If they are a first-time presenter, the team might explain briefly what their work aims to achieve, and what they expect from the presenter. These presentations are usually done by a nurse, ward manager, or matron, some of whom are quite nervous to talk to the team about protocols that may not have been followed, and harm that may have been inflicted on a patient. Some speakers are matter of fact, some defensive, some are apologetic, others are looking for help.

As an example I will describe Madalena's, a managerial nurse, preparation for the meeting. She describes her investigation of the 'incident'; a pressure ulcer that was found on her ward:

> *I see it as a lot of reflection. (…) We need to understand and put together things in the investigation without being biased, because as much as I love my wards and my staff, if something went wrong we need to be aware of what went wrong and work towards [improving] it. I start with the [incident reporting system] and see what happened and I try and see the patient's skin if possible. I have a lot of experience and training in tissue viability (…) so I can see if the categorisation was correct by looking at the skin or the pictures; then you can direct your investigation in a more specific way. I speak to the staff next (…); when did you find it, was it different before, what did you do, what do you think you could have done that you didn't do?*

She explains that her investigation involves seeing the patient and the wound, patient records, and asking the ward staff about what they think happened for the ulcer to have developed. She also considers what should have been done differently to prevent the pressure ulcer from developing.

When I speak to one of her colleagues, a managerial nurse, she says that it takes her about a day to investigate a pressure ulcer. Like her colleague, she goes to see the patient and inspects their skin if possible. She reads all records and documentation available, and she talks to her colleagues who worked with the patient. She usually conducts these investigations after her normal working hours because she does not have time to complete them alongside her existing work. Even if she does find the time, she is constantly interrupted because the ward is short-staffed.

Each discussion of a pressure ulcer at a meeting starts with the nurse presenting their investigation, many of whom use a template written by the quality governance team:

On one particular occasion, a presenter started off with the medical history of a patient, describing when two pressure ulcers were found and what subsequently happened. She says that no skin assessment was done in the first six hours after the patient was admitted. They had been admitted during the night, but two deep tissue injuries were only subsequently picked up by the day staff. The skin had been checked by night staff, and found to be blanching. This is a technique to test if a red mark on white skin is a pressure ulcer or not. Normally, the skin will turn slightly whitish if pressed, before returning to its reddish colour. But if it does not go whitish, and stays reddish, this may well be a sign that an ulcer is developing. The patient was complaining of significant discomfort, making it difficult to check their skin. Their elbow was elevated due to swelling and pain, and was referred for medical photography.

The presenter reflects on what she thinks went wrong at the time. She explains that no risk assessment for pressure ulcers[31], nor the care planning tool for pressure ulcer care and prevention[32], had been in the accident and emergency room. According to protocol, both should be done within six hours of admission. Furthermore, an assessment to determine what needs to go in the care plan was not started straight away because of the limited mobility of the patient. Finally, the patient was moved onto an air mattress later than they should have been; these mattresses help prevent pressure ulcers. She states that the patient has passed away now.

The team responds with questions and clarifications. One of the team says that the patient ticked all the boxes for a high pressure ulcer risk assessment score, meaning preventative measures should have been put in place early on. They ask about the special mattress, with the presenter replying it was introduced after the patient came back from a medical treatment. Another member of the team responds that the long wait in the accident and emergency room is concerning; it is up to 24 hours these days. All of this time waiting in the emergency department is spent on a normal mattress, which clearly can increase the risk of developing a pressure ulcer.

The team discuss whether the staffing levels were low that day or not. One of the tissue viability nurses says that the patient had been seen by the tissue viability service during a previous hospital admission, but not this time. No photographs were taken of the wound either, so, she concludes, there is no 'objective evidence' that they had been correctly categorised as deep tissue injuries. Everyone spends some time discussing the exact timeline of events, after which they ascertain that it is difficult to grade the pressure ulcer, because of the lack of information. So they ask the presenter to try and find out what exactly happened for the next meeting by asking relevant staff: what did we do, when, and what should we have done? But those present at the meeting also learn that the patient's mattress had not been working properly. One of the team says this should have been mentioned from the outset. They should also find out what the nurse who was taking care of the patient thinks about what happened. The team tells the presenter to come back with a more comprehensive investigation next week.

The meeting then progresses to determine how avoidable the incident was. At this time, they can only do a preliminarily analysis because of the follow-up discussion next week. Usually, one of the team members starts in the middle of a scale of avoidability and asks the presenter to elect whether a case should be higher or lower by asking: *Do you think this was probably avoidable or possibly avoidable?* In this instance the presenter says that if the deep tissue injury had been noticed at the time of admission, she would have said it was probably avoidable, and that the ward is

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[31] This is called a Waterlow assessment.

[32] This is called the ASSKING tool, for more information see Young (2021).

learning from their mistake of not documenting this in a timely manner. No one disagrees, so they move on to the next step in the scale: *Was there strong evidence of avoidability or was it probably avoidable?* The presenter seems nervous and starts to stammer. The team member posing the question explains that they need to consider the medical history of the patient and their risks of developing a pressure ulcer. The presenter eventually says that it was *probably avoidable* and everyone in the team agrees.

The case ends by the team lead asking the presenter to get clarity on the timeline of how this pressure ulcer happened and to fill out an action plan template. They set a date for her to present again. Finally, they also ask her to check out if the patient was part of a wider problem in terms of exceeding waiting times in the accident and emergency department.

Retrospective speculation

As described above, presentations at the multidisciplinary meetings usually include the medical history of the patient, and their journey through the hospital. For example, when they were admitted, how long they might have spent in the emergency department, and which wards they were transferred between. The presentation always includes the moment the pressure ulcer was found, possible risk factors the patient had, whether these were identified with a risk assessment in a timely manner, how they were addressed, and whether all of this was documented. The investigation is about what happened, identifying potential reasons for why it happened, whether everything happened at the correct time, and if everything was documented. And these are all arranged onto a clear timeline.

In this way, the team examines the past and speculates about which things, practices, and circumstances may have contributed to the pressure ulcer developing. It is a type of retrospective speculation not only about what happened, but when interventions could have been introduced. Combining their training, experience, national guidelines, and other knowledges, they speculate about what aspects were preventable, and how these contributed to the ulcer developing. This can be viewed as an attempt to create certainty in the uncertainty of prevention.

A practical example of this is the template the team developed for presenters to investigate how the pressure ulcer developed. The template is based on summary findings from previous investigations of pressure ulcers, and lists of things to check if they were done. But once established, the template has become a sort of measurement of good care in itself, highlighting what was preventable or not. This creates a kind of certainty and at least the shared view that ideally things can be controlled. One of the multidisciplinary team members told me that at a similar type of meeting, they also have a kind of template to look at what was going on at the wards and checking whether various processes were done on time, according to protocol. With these structured formats they avoid the uncertainty of prevention by creating a list of things that should have been done and that can be checked off. While in practice each presentation is more nuanced, providing individual details for each case, the template ensures investigations are roughly standardised allowing the team to navigate the uncertainty of prevention, and yet also finding a way to maintain a sense of control. The structure of their investigation, and the scaling of avoidability are all attempts to create structure in chaos.

Throughout this process, the team imagines (Bryant and Knight 2019, 103), and defines a form of 'good care' in which the pressure ulcer would not have developed, as a counter-point to the actual care practices that were actually done and sometimes omitted. The team hunt for opportunities that could have changed the course of events, by listing the things the hospital staff had some agency over. In doing so the team enacts a 'wanted future' (Lemos Dekker 2020). This is contrasted with the accounts of failings and 'non-actions' that ultimately led to an 'unwanted future' (ibid.) for both patients and staff.

Anticipating the future: Learnings and action plans

Based on these investigations of the past, the team move onto what they call 'the action plan', in which 'the learnings' are listed and a plan is designed to put them into practice. Madalena, explains the process during an interview:

> *So once I present at the meeting I usually have an idea of what went wrong and have an action plan in mind or even in place to help prevent it from happening again. (…) It's important for the meetings (…) that I present everything that's been done and then to have the comments from the specialists; the safeguarding, the tissue viability nurse, and governance. And then it's the other side, feedbacking it to the team again and for them to understand the importance of it.*

The team invites the presenter to propose a plan to prevent mistakes that were made from happening again. Similar to the pressure ulcer investigation template, there is a list of pre-defined topics to help structure this, which is divided into themes to do with knowledge, communication, learning, and patient centred care. Examples include talking about pressure ulcer prevention at the daily ward staff meeting, organising teaching sessions with a tissue viability nurse coming to the ward to talk about pressure ulcer prevention, disseminating information to ward staff on how to use a particular medical device, and making sure ward staff document everything they do carefully and accurately.

A lot of the action plan aims are to improve knowledge and to raise awareness of pressure ulcer risk, prevention, and care. One of the ways in which this is done is through visuals, such as posters about pressure ulcer categorisation or reminding ward staff about checking the skin for damage underneath anti-embolic stockings. This latter issue was a recurring problem; when yet another patient acquired an ulcer under his anti-embolic stocking, the team brainstormed ways to raise awareness about this among staff.

> Gisele (managerial nurse): *This is the same message as before. How do we drive that message home when the skin needs to be inspected underneath the anti-embolism stocking? We continue to see this.*
>
> Marissa (tissue viability nurse): *I include it in the pressure ulcer study day, but this reaches only twenty people at the time. Maybe a video on intranet? It's about that constant intervention of inspecting the skin underneath and we need to keep reminding everybody. We need to get the current supposedly routine assessments to be done first, before we add more in though.*
>
> Gisele (managerial nurse): *That is worrying me though.*
>
> Marissa (tissue viability nurse): *How many people do read the intranet or their email? We can put information out in so many different formats.*
>
> Stacey (quality governance manager): *Another idea is to do a safety lesson of the week: maybe print it out and put it in the tea room for people to see on their breaks.*
>
> Marissa (tissue viability nurse): *Or a pop-up on computer screens?*

Through this exchange the team agree that there is a widespread problem with individuals not checking underneath anti-embolic stockings. Their suggestions to address this show that the learnings and action plans are two-fold. Firstly, they include ward specific actions for the presenter to take away with them. And, secondly, they engage overarching quality governance actions that may arise from noticing repeated mistakes across different wards.

Anticipation

The team works on the basis that pressure ulcers may develop in future patients because of ‘mistakes’ that are similar to those which they have already investigated. However, the team can never be completely sure what actions are, or are not, instrumental. They navigate this through the plans and actions that can be ticked off. Additionally, they make an overarching action plan to operate at a broader institutional level. Stacey, who works in the quality governance team, tells me about how it was designed:

> *After a year someone from my team reviewed all the individual action plans that the ward had said they were going to do and we made a site-wide action plan and the tissue viability team validated that. (…) Now it’s four key areas with a whole load of actions in them, so it’s probably unworkable as it stands at the moment. But I can’t get a temperature check on where the wards are, so I’ve created this work progress plan (…), so we can see: what are the wards that need help? I can’t see what wards need help, because nobody completes it.*

She explains how they have tried to draw more general conclusions about which interventions can be made to prevent pressure ulcers and compiled a list of them for wards to draw on. However, they cannot control the actions of other staff and if no one fills out their surveys they have no idea if progress is ever made on the wards.

Prevention, agency, and sense-making

During a chat with one of the team members, Stacey summed up the team’s approach at promoting pressure ulcer prevention: *There is nothing more useful from a learning point of view than going over it and looking at what happened and why.* I have unpacked this practice of sense-making by using the concept of ‘future-orientation’ (Bryant and Knight 2019) to highlight the temporal aspect of how the team members navigate uncertainty in prevention through a kind of retrospective speculation which examines the past, and anticipates potential futures. I will now share some final reflections on the team's conceptualisation of prevention.

At the time I was thinking through this paper and the team's work of imagining different realities, I watched the science fiction film 'Everything Everywhere All at Once' in the cinema. The film unpacks the question of what one's life could have been like if different choices had been made. The characters in the film create an alternative reality every time they make a choice that defines their lifepath. With every choice they make, their lifepath forks into two; the one they chose and the one they chose against. This creates two parallel realities, but are only aware of the one they are in. Through all the choices they make in their life, multiple alternative realities and lifepaths are created. In the movie, some people are able to travel between the various lifepaths they have created, downloading skills and knowledge they acquired in the alternative lives. In a somewhat similar way, the hospital team use their meetings to imagine different routes in which the patient does, and does not, develop a pressure ulcer.

My choice of the concept of routes to describe this was inspired by Charis Cussins' (1996) concept of 'trails of activity' (in turn, inspired by Adrian Cussins idea of 'trails' (1992)) in her paper about the agency patients have in processes of objectification in infertility clinics. She writes that 'trails of activity' suggests 'a notion that is at once normative – there are places to go and sensible ways to get there – and yet locally constituted, contingent, informed by experience, irreducibly social, but not laid down in advance. It is a spatio-temporal but non-rigid metaphor for capturing the cycles of objectification involved in the distribution and redistribution of activity through time and space, and among people and things in the clinic' (605). While the idea of a series of events or a timeline as a trail is useful, it describes the past; a trail that is left behind. It does not include what is imagined about the future. Therefore, the concept of routes is more accurate. It emphasises that the activities, events, and their consequences are both in the past and in the future. It is imagined, and mapped. It emphasises the work that goes into designing them.

In the clinical context of my study, the concept of 'pathways' or 'clinical pathways' may have been more expected, because 'clinical pathways' are commonly used in the NHS and pressure ulcer care. They are structured decision-making aids that present multiple options and by choosing one it presents a choice again. After a couple of choices, it presents the conclusion of what needs to be done. They are aimed at transforming guidelines into local plans for care and to standardise care practice in this locality (Lawal et al. 2016). These aids are often visualised with straight lines or arrows leading from one question to the next and branching into the different options. An example for pressure ulcer care would be about types of treatment, or the need for a care plan, when encountering a pressure ulcer. This would comprise various steps, such as what it looks and feels like, the categorisation of the pressure ulcer in terms of type and severity, what sort of assessments need to be done, and what sort of care plan needs to be implemented based on the outcome of the assessments. Clinical pathways are meant to address complexity, case-based specificity, and disorder, by providing a clearly signposted path towards a decision or outcome. In contrast, I use the metaphor of routes to invoke messiness and local specificity. It captures the trial-and-error, and the imagination needed to craft a route through diverse and sometimes uncontrollable factors.

In navigating the uncertainty in pressure ulcer prevention, the team imagines temporally parallel routes of practices and events; one in which no hospital acquired pressure ulcer develops, while in others there are '(un)desired futures' (Lemos Dekker 2020). On the imagined route on which no pressure ulcer develops, interventions were put in place, good care was delivered, and the patient was kept safe. The team puts a lot of effort into helping other staff, such as ward nurses and healthcare assistants, also imagine these parallel timelines. Their practices are aimed at making hospital staff feel they can make a change; that they can prevent pressure ulcers; and control which route they are on with their patient. This shows a core characteristic of prevention: control and agency. Prevention is about finding out what you can control, where you can intervene, what you have agency over, and ultimately exercising that power. Practicing this demands a generalisation of an uncertain past to an uncertain future. The team generalises from a particular case they are investigating to all potential future situations that should be handled differently, so that no pressure ulcer develops. They move from the specific past to the general potential future, through the dynamic and equally uncertain landscape of the present.

Conclusion

In this paper I have unpacked how the temporally and spatially distributed nature of pressure ulcer care creates uncertainty in prevention. This makes it difficult to identify a specific person or thing that can be said to have caused the pressure ulcer or a key time when it arose. A dedicated team that promotes pressure ulcer prevention adopts a logic of looking at the historical circumstances of individual cases in order to try and predict influence future occurrences. The team hold weekly meetings in which they investigate why, and how, hospital acquired pressure ulcers developed. They decide whether it could have been avoided, assessing how much *evidence of avoidability* there is. They then make plans on how to prevent them from developing in the future. In doing so, they collectively imagine temporally parallel routes of events. On one route, a pressure ulcer does not develop, and on the others, it does. By educating hospital staff about pressure ulcer prevention and raising awareness of the problems they cause, they attempt to make other colleagues imagine those routes too, encouraging a sense of agency and control over which route they are currently on in their journey with their patients.

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Chapter 5: Paper 3: Removing or moving pressure: The politics of pressure redistribution in bed sore care in the National Health Service

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Primary Supervisor	Prof. Simon Cohn		

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Paper 3: Removing or moving pressure: The politics of pressure redistribution in bed sore care in the National Health Service

Abstract

In this paper I unpack the medical device industry's promise that their product can remove pressure off the NHS, the staff, and patients' skin. I contrast this idea of pressure being removed simply with the complexity of pressures moving in a variety of ways and directions. I explore where the pressure is moved to, the consequences of this redistribution, and how the claim for technological solutions is maintained.

The paper centres on a story of a bed that was left unplugged in the hospital. The battery of the mattress pump died so the mattress deflated, which caused the patient who was at high risk of developing a pressure ulcer to begin with, to be lying directly on the hard bed frame underneath the mattress. She developed several serious pressure ulcers.

In unpacking this event, I present the bed as an active actor, interacting with other actors. I trace how medical devices like the unplugged bed shape the ward and the work needed; the practices (what needs to be done), routines (when it needs to be done), places (where it needs to be done), and actors (who or what needs to do it) which all come together. I argue that in altering this work, the redistributed pressure concentrates in new places, creating new vulnerabilities, because they escape the normal vigilance. I unpack the politics of this redistribution of pressure; and argue for greater critical thinking when introducing technologies that promise pressure removal by asking: Where will the pressure present itself next?

Removing or moving pressure: The politics of pressure redistribution in bed sore care in the National Health Service

> ‘The rapid development of technology is a key opportunity to free up staff time. (…) Improving technology will free up expensive staff time and provide safety prompts that will improve the quality of care’ (National Health Service 2019, 87).

The NHS (National Health Service) Long Term Plan states that new technologies will save NHS staff time, money, and improve care. This is much needed, because the NHS has been under serious pressure for years (The King’s Fund 2019), including staff shortages (Morgan 2022) and shortages of beds in acute care, contributing to long waiting times in emergency departments (Jones et al. 2022). The technological solutionist belief that technology can solve big problems and relieve organisational pressures is widespread in the NHS, reproduced in policies through to conversations in hospitals.

Pressure ulcer care and prevention[33] in the NHS comprises a unique set of practices when it comes to technological solutionism, because there is a double need. Both staff involved in pressure ulcer care, as well as patients’ skin are in need of pressure relief. Simply put, pressure ulcers are injuries caused by continuous pressure on skin, for example when lying or sitting in the same position for a prolonged period of time. The pressure leads to a reduction of blood flow in the skin, causing tissue to die. There are many circumstances that can contribute to pressure ulcers developing, without which the pressure on the skin might not result in an ulcer. Diabetes, vascular disease, obesity, impaired mobility, and malnutrition are just some of them. Pressure ulcer prevention and care take the form of ongoing routines, such as regularly changing the position of the patient to prevent too much pressure from building up on the skin.

The medical device industry sells a variety of materials and devices to help relieve pressure off patients’ skin, such as special mattresses with air cells that inflate and deflate. Companies promise that these technologies not only remove pressure off the skin, but in doing so, also off the staff and the NHS. A company called Frontier Medical Group, for instance, sells a system that

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[33] The concepts of pressure ulcer prevention, pressure ulcer treatment, pressure ulcer management, and pressure ulcer care overlap in meaning. Pressure ulcer treatment can mean using creams, dressings, and technologies like pressure redistributing mattresses to promote healing of a pressure ulcer, but these practices also prevent the pressure ulcer from deteriorating and new pressure ulcers from developing. Pressure ulcer care and prevention, however, encompass more than pressure ulcer treatment and management. In my use of the concepts, the former include a wider array of practices that aim towards improvement of pressure ulcer outcomes, such as staff trainings on pressure ulcer prevention, and multidisciplinary meetings to investigate pressure ulcers. Pressure ulcer treatment and management, by contrast, refer to practices more directly related to specific pressure ulcers on individual patients.

repositions patients automatically and uses the slogan ‘Let Toto take the strain, so you don’t have to’ (Frontier therapeutics store n.d.), claiming it helps prevent pressure ulcers and takes over some of the prevention work that nurses and healthcare assistants would normally do.

NHS staff also look to technology for this double pressure relief. During a conversation about why a particular pressure ulcer developed in Hospital B, Donna[34], a managerial nurse[35], explains that the pressures on the nurses and healthcare assistants in her ward had made it difficult for them to prevent the pressure ulcer.

> *It’s difficult when you’ve got four nurses taking care of 32 patients. Plus, since Covid, the patients seem sicker. Very rarely do you get a patient now that is mobile and self-caring.*[36]

Mia, one of the tissue viability nurses[37], responds to Donna:

> *That’s why I’m looking into a lateral turning system to support the staff.*[38]

Lateral turning systems are medical devices that reposition a patient in their bed automatically, by inflating alternating sides of the bed, and thereby shifting the patient’s weight to their other side. Mia says that she sees the ward staff is under a lot of pressure because of staffing shortages, so she is looking into purchasing these turning devices to support the staff. The technological solutionist belief that in this way pressure can be removed off the skin, and so automatically reduce staff workload, is widespread in policy and staff, opening endless opportunities for the medical device industry.

The anthropological literature on the promise of technology in care (see, for example, Gardner and Warren 2019; Hannes and Truyen 2023) and on technology more broadly, is extensive (see, for example, Bruun et al. 2022). My study is situated in a debate that opens up who and what is involved in care. It conceptualises people and things as actors in networks (see, for example, Johnson 1988; Law and Mol 2008). In the context of care, this includes studies about the built-environment in dementia wards (Driessen 2020), new tele-monitoring sensor technology in home care (Kamphof

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[34] The names used in this article are pseudonyms to protect interlocutors’ anonymity, including Hospital B.

[35] I use ‘managerial nurses’ to describe nurses in managerial roles, such as ward managers, matrons, and directors of nursing. Since only a few nurses work in each of these roles, grouping them into one collective protects interlocutor’s anonymity.

[36] Most of my data are observation-based, meaning I do not always have exact quotes of what was said. In this paper I indicate both interview and observation data in italics.

[37] Tissue viability is a nursing specialisation in wound care and skin health.

[38] I chose to write fieldnotes in the ‘ethnographic present’ (Fabian 1983, 80). This was a stylistic choice that compels the reader to feel present along with myself as a researcher in the field. I do not aim to mimic objectivity with this style. I make regular reference to specific moments in time to make it clear that I do not want the text to be read as though it were ‘out of time’.

2017), and wheelchairs (Winance 2010). Studies such as these show in detail how technologies and materials can be mobilised, manipulated, and tweaked. But they also reveal how they can actually hinder people to achieve what they want. Studies about the introduction of new technologies call for attention to how practices and relationships need to be adapted and newly built with, and around, the technology (Pols 2017).

One further theme in the above literature is that this often needs to happen through a process of 'tinkering' (Mol, Moser and Pols 2010; Pols 2017, 2) or 'reflection-in-action' (Kamphof 2017, 411). Mol (2006) has argued care is a continual back and forth between trying potential solutions to problems and seeing whether they work to get the desired result. Tinkering with technologies in care takes time and requires calmness. So what happens if the pressures are high and the need for relief and solutions is urgent? What happens when there is no time or space to adapt care routines and build relationships? What happens when technologies 'misbehave', are unreliable, or otherwise do not meet expectations?

I draw inspiration from Mol's (ibid.) chapter in which she contrasts the patient role of a customer in a 'logic of choice' with the role of a sick person in the 'logic of care'. I compare medical device companies' promises with the roles products play in Hospital B, the main fieldsite of this study. I take inspiration from material semiotics, which approaches meanings and things as relational and through specific practices (for more on this approach, see Pols 2017; Hout, Pols, Willems 2015, 1215). In Pols' words, 'Technologies get their meaning, and ultimate function, in the way they are put to use' (Pols 2017, 2). I ethnographically examine the relationships which become entangled with the technologies, and consequently how their introduction changes existing caring practices.

The study

This paper is part of my doctoral study, in which I ethnographically trace what pressure ulcer care and prevention practices show us about the larger pressures on the NHS, and different ways in which the two pressures are connected. When I started the study I assumed my research would only take place in an NHS hospital. I posted a message on X asking if anyone working in pressure ulcer prevention and care wanted to talk to me about their work. Hilda, who works in a company that produces products for pressure ulcer care, responded and we set up a call. She told me that the medical device industry is often forgotten in studies about pressure ulcer care, but that they are a big actor. While I initially expected my research to be limited to the NHS, the boundaries of the network of pressure ulcer care suddenly expanded; to follow the narratives about and practices of pressure redistribution, I had to include the medical device industry in my study.

After about a year of preliminary fieldwork and arranging ethical permission, I conducted my fieldwork in 2021 and 2022. I approached companies that sell products for pressure ulcers that were either located in the United Kingdom or had a branch there. I conducted sixteen online interviews with members of staff working at a variety of companies. We talked about their work. Many of these members of staff used to be nurses in the NHS and moved to industry. I attended events both online and in-person, such as study days, conferences, and online webinars during which companies present and promote their products.

I selected Hospital B through snowball sampling; I presented plans for the study and someone in the audience told me she had contacts in a large hospital. She referred me to them and the ball started rolling. The first nine months of 2022 I attended online hospital team meetings about pressure ulcer prevention once a week, and was in Hospital B two to three days a week shadowing members of staff whose work involved pressure ulcer prevention and care in a variety of ways. I shadowed tissue viability nurses specialised in wound care and skin health, healthcare assistants, and ward nurses. I conducted a total of twenty-seven interviews with members of hospital staff, both online and in-person. I chatted with ward managers, directors, occupational therapists, medical photographers, quality improvement managers, housekeepers, and people working in staff recruitment. Overall, my fieldwork in industry and Hospital B led me to spend time with a diverse set of materials and technologies, and people in a variety of disciplines, teams, hospital floors, and hierarchies.

Removing pressure

What are pressure ulcers? Clinically, pressure ulcer development has been conceptualised as a linear process, with several stages which begin with a closed wound, which then becomes open, deeper, and, finally, necrotic, having dead tissue and underlying structures visible. There are two additional categories; ‘unstageable pressure ulcers’ cannot be categorised into one of these stages because their depth is invisible, and ‘suspected deep tissue injuries’ which are dark wounds that are probably very deep, but the depth is not visible. Wound development and healing can be complex, and does not always adhere neatly to this linear process. Pressure ulcers are categorised as a chronic wound because they may not progress from one of these stages for long periods of time, sometimes years (Frykberg and Banks 2015).

Pressure ulcers can cause patients serious suffering and can be debilitating. For instance, they can be incredibly painful, restrict positioning or moving one's body, the dressings can be located inconveniently, or intense malodour can come from the wound. They can be small and heal by themselves as long as no pressure is placed on the wound. But this is often complicated, because they usually develop in places where pressure was placed for a long time. Body habits, routines, and positions need to be changed. Very serious pressure ulcers need surgery to force them into the next stage of healing. Severe wounds can even be life threatening.

The responsibility for pressure ulcer prevention and care in NHS hospitals is placed mainly on nurses and healthcare assistants working on wards, supported by tissue viability nurses who work across the hospital. However, many more actors are involved; hospital staff in different roles, patients and their families, medical device companies and their staff, and the technologies they sell, such as special air mattresses and cushions, dressings that promote wound healing, and boots that relieve pressure off heels. Many of these actors cross assumed boundaries between the NHS and the industry (see Cowan 2020, 67-69; and chapter 1 for more on the permeable boundaries of the NHS). At times I observed industry and NHS actors merge, while at other times the boundary between the NHS and industry seemed clear and absolute.

The medical device industry is a group of commercial companies that develop, produce, and sell products to be used in healthcare. Many products are accompanied by programmes to train healthcare staff how to use them. These can be short-term, for example when a product is newly introduced, or long-term, when a member of industry staff goes into a Trust on a regular basis to support hospital staff using their product. Industry staff can also support hospital staff to troubleshoot a product malfunctioning or showing an alarm. The companies develop study materials and organise study days, conferences, and webinars on medical topics such as tissue viability, often inviting prominent scientists to present their newest work. Companies also present their products at medical conferences and study days.

While the medical device industry is commercial, aimed at making profit, it is not merely that. The employees I interviewed told me they are tired of being approached with suspicion and distrust by NHS staff because they were associated with making profit. They told me that they share the ambition to improve healthcare, and work very hard to do this. They also told me that there is so much knowledge and development going on in the industry that could be used much more by the NHS than currently. One person, however, emphasised that companies obviously aim at making profit, and need to in order to survive. They would, for instance, not provide as much intensive support to a Trust that did not buy their product compared to one that does. This paper is not about criticising the industry, nor am I interested in examining whether or not products actually relieve pressure off the staff or the NHS or the skin. Instead, I want to explore what lies behind the apparently simple idea that technology offers a simple solution to complicated care issues.

There are many different products, such as cushions for patients to sit and lie on, foam mattresses with gaps or softer areas to relieve and redistribute pressure, and mattresses with air cells which alternate between being pumped up and deflated. Other products include repositioning aids. These are placed underneath the mattress, and raise the bed to help a patient reposition. Smaller products include dressings with special properties, such as introducing moisture to the wound, or ones made out of antibacterial material. There are highly absorbent dressings for wounds with too much fluid (called exudate), and silicone pads shaped to certain body parts at risk of developing ulcers.

The industry makes promises about the safety of its products and services and what they can achieve. Many of these promises are about how the product will remove pressure off patients' skin. But companies also make promises about relieving the pressure off the NHS and its staff more broadly, often drawing a connection to the pressure on patients' skin. In webinars, websites, and other media through which companies promote their products, companies usually start out by pointing to big numbers, such as how much is spent on chronic wound care in the UK or how many wounds the NHS manages. They then explain how their product can work to reduce this cost and pressure on the NHS by helping prevent pressure ulcers, and speeding up their healing. An advertisement for an app for wound care, for instance, states that it will 'optimise care' and 'ease the burden on care teams by empowering all staff members to provide quality wound care under the remote guidance of expert clinicians' (Healthy.io n.d.). Another company's video about their pressure monitoring mat indicates that it will relieve financial pressure on the health service by reducing the monetary burden of wounds (Drive DeVilbiss Healthcare n.d.).

A common claim is that a particular product will save nursing staff time. 'Requiring active monitoring and management, pressure injuries are very time consuming, especially for nurses with large numbers of patients to care for and long to-do lists. The dressing durability, anatomical shape, and Safetac gentle adhesion technology can help the dressings stay in place for several days, reducing the frequency of dressing changes' (Mölnlycke n.d.). During an interview with Benny who works for a company selling dressings, he explains how these can help reduce the pressure off NHS community nurses because they are more absorbent than other dressings:

> *So the big thing is the absorbency with our products. (…) Handling that fluid is extremely important, but also if the absorbency is higher, the wear time is longer, so you have less dressing changes, (…) so if you're a community [nurse] (…) you're having to go to a patient to*

> *change the dressing. To go in, to change, that's a big investment of time (…) so it's a massive investment of your resource. So if you can reduce the amount of dressing changes by you know, 25%, 50%, that's a profound impact on those clinicians in that area, because, yeah, it just frees them up.*

As I have already touched on, one of the functions of dressings is managing the moisture levels of a wound. Wounds should be just wet enough to promote healing. Benny explains that the dressings his company sells are more absorbent and consequently can stay on the wound longer. Because fewer dressing changes are needed, nurses can spend less time on wound care. His company promotes their products as effectively replacing some of the routine tasks nurses usually have to do.

Similar promises are made about other products, such as pressure relieving mattresses. These come in several varieties, one of which consists of air cells that are inflated and deflated automatically and in an alternating fashion. When the cell inflates it supports the body, creating pressure on the skin, when it deflates that pressure is relieved. Although there is still a need to reposition patients on these mattresses, this becomes less urgent.

Below, I trace what the products do and how they shape the ward and the work. I will unpack this by telling a story of a pressure ulcer I encountered several times, in different settings in Hospital B. I call it the story of the unplugged bed.

Moving pressure: The story of the unplugged bed

The story is about a mattress pump being left unplugged. I encountered the story many times and in different contexts in the hospital. There were different versions, both because there were disagreements about what happened, and because there were parallel stories about other patients developing pressure ulcers because beds were left unplugged.

The first time this pressure ulcer and I crossed paths was when I shadowed tissue viability nurse Sophia. Before we leave the tissue viability nurses' office, she explains some of the background of Toni, the patient she is going to see. She shows me the pictures taken of Toni's wounds by the medical illustrations team. She explains Toni was on a special air mattress for pressure ulcer prevention, because assessments showed she was at high risk of developing skin damage. This mattress, consisting of air cells that alternate inflating and deflating at intervals, is designed to do some of the work of staff by removing pressure off patients' skin and redistributing it. However, Toni's mattress had deflated, resulting in her lying on the hard bed frame, causing high pressures to build up on her skin. She deteriorated rapidly and developed pressure ulcers. The photographs show three angry-looking wounds. Pointing to two of the dark areas, Sophia tells me she thinks they will grow towards each other and merge into one bigger wound. The safeguarding team has been notified about the wound and what happened with the mattress.

We walk to Ward K and gear up in plastic aprons, and finally enter the room wearing blue face-masks and gloves. Sophia inspects the bed by pushing on different parts of the mattress. She is not sure it is working properly. She asks one of the ward nurses to help her turn Toni and directs her which way to go and where to hold the bed rail. As she moves and lies on her side, Toni cries out in pain continuously. The ward nurse explains this is because of her fractured ribs. Sophia carefully peels back the dressing covering the wounds on Toni's back and quickly measures them. They have deteriorated badly, she explains to me. She asks me to write down the measurements and some of her notes about the wounds. The ward nurse says she changed the dressing earlier that day. Sophia puts the dressing back, because, she says, *One change per day is enough.*

Sophia messages her tissue viability colleague Mia to help assess if the mattress is working. They inspect the mattress together by pressing the air cells in different areas of the bed and unzipping the cover to have a better look. Mia ascertains that the mattress is indeed not inflating as it should, but that there is a foam layer underneath the air cells, so at least Toni is not lying on the bed frame directly. She is very concerned though.

It turns out that the mattress pump hanging on the end of the bed had not been plugged in properly when the porters took Toni on the bed for an X-ray and then brought her back. However, even when plugged in, the mattress still does not seem to inflate properly. Mia discusses with the two ward nurses that are now in the room whether the alarm on the bed was going off today. She also asks them how long Toni had been on this bed. She explains that normally they can call the bed's company for help, so she will try that today. They also talk about today's staffing levels on Ward K. The ward nurse explains there are four nurses and five healthcare assistants, compared to normally six and six. Mia then says Toni's story will need to be discussed by a team which investigates serious pressure ulcers believed to be hospital acquired.

Sophia and I go back to the office while Mia stays with Toni in case she has to adjust the bed according to the company's instructions. When she comes back to the office about 45 minutes later she tells us she spent this time with Toni's daughter explaining what happened, what will happen next, and apologising. The daughter was very kind and understanding. Mia says she will ask the company to investigate and give a full report about the fault in the mattress and its installation.

About two weeks later, Mia tells me she met Toni and her daughter again and this time the daughter was angry because of what happened. Mia says she understands and expects the daughter will take legal action. A week after this, during a tissue viability team meeting, one of the team members mentions to me that Toni has passed away and that while she is not sure the pressure ulcers contributed to her death, she expects Toni's daughter is probably still angry about it. After a further week, during an interdisciplinary meeting that investigates pressure ulcers that develop in the hospital, one of Ward K's managerial nurses and the team discuss whose responsibility it is to make sure the mattress pump is plugged in after a patient may have been transported temporarily elsewhere. With the staffing shortages on Ward K in mind, they argue that the porters should share the responsibility, and set up a meeting with them about it.

In this story of the unplugged bed the pressure that the mattress promises to remove off the patient's skin and off the staff, does not simply disappear. Instead, the mattress, bed, and pump, shape the practices (what needs to be done), routines (when it needs to be done), places (where it needs to be done), and actors (who or what needs to do it) needed in the ward.

Practices and knowledge: Shaping what needs to be done and known

The story illustrates how medical devices influence the work required by the other actors in pressure ulcer prevention and care; for instance, that the mattress needs to be plugged in. Furthermore, the ward staff need to know how to troubleshoot when the pump's alarm goes off, when it is deflated, or malfunctioning, and how to contact the bed's company. And also, the porters need to communicate to the ward staff when a patient is back in their room, so that someone can check if the bed is plugged back in and inflated properly.

In order to do this, different skills and knowledges are needed. There is a wide range of medical devices, with some being more specialist than others and requiring a different level of expertise. A dressing, for instance, is less specialist than a pressure redistributing air mattress. Ideally every nurse and healthcare assistant in the ward would have been trained by someone from the mattress company about how to use it. Often, however, not every member of staff can take the time for these sessions while high staff turnover often means that newer staff have not yet been trained.

Despite offering training, companies present the use of their products as straightforward. At one event the tissue viability team organised to raise awareness of pressure ulcers and how to prevent them, Sophia showed attendees a specialist bed system similar to the one in the story above.

At the end of the day she had to turn it off. She unplugged it and its alarm started going off, flashing a light. She pushed several buttons, once, twice, for a few seconds, but nothing seemed to turn the machine off. I tried to help, and we discussed it, and improvised for about ten minutes until it finally turned off. We were not sure how we did it. Sophia said she now understood why the ward staff struggle with these beds.

Rather than simply removing pressure, specialised medical devices require staff to do different practices and have different forms of knowledge. When I discussed one device that helps patients reposition automatically by alternating inflation on one side of the bed and deflation on the other, Nicky, an occupational therapist, summarised this accurately:

> *Ideally, it relieves the need for somebody doing it, but actually it creates another need in the sense that it's a specialist piece of equipment so (…) it adds another layer of complexity in a different way.*

Her point illustrates how such devices shape both which practices are needed from other actors, as well as which knowledge and skills they must possess.

Routines: Shaping when it needs to be done

A second way in which devices such as the unplugged bed shape pressure ulcer care and prevention is temporally. They determine routines of when things are needed and done. When discussing the story of the unplugged bed with Aline, a managerial nurse of the ward where it happened, I ask her about the promises the industry makes and if she thinks medical devices really can relieve pressure off the staff and NHS. She tells me:

> *I think it does. I think it helps. (…) Even though [an air mattress, for example,] can give a false reassurance, (...) as long as there is still the rationale that the patient needs to be turned and if it happens a little later than ideal (…) the mattress did help relieve the pressure in the meantime. (…) It gives the nurses another hour or a couple of hours not to worry about turning the patient, (…) and it helps the patient as well.*

She explains that pressure redistributing mattresses relieve the pressure off the nurses and healthcare assistants, because they have a little more leeway in when they have to reposition the patient. This highlights how devices like pressure redistributing air mattresses change the temporality of the work the nurses and healthcare assistants need to do.

However, relying on technology can come with risks. Sometimes technology 'misbehaves’ or is faulty which comes with the risk that pressure is not moved, leading to peak pressures on skin. One example of this relates to an earlier model of foam mattress, that had plastic covers. This caused patients to sweat, which made them more likely to damage their skin. Other examples are tubes in patients’ noses, which can cause small but serious pressure ulcers on the nose or face, or face-masks worn by staff during the covid-pandemic pushing so hard on their cheeks during long shifts that some of them developed pressure ulcers. When a pressure ulcer is believed to have been caused by a medical device it is called a ‘medical device related pressure ulcer’. Sometimes these can be prevented by using a different device (if available), or by using the original one differently. For example, the position of a tube in patients’ noses can be changed every couple of hours, or taped to their cheek so that it does not lean on the nostril. In other instances, the use of a device is deemed to be essential to save a patient’s life, and a medical device related pressure ulcer is regarded as unavoidable.

Aline, the managerial nurse, also mentions another commonly used medical device; Thrombo Embolus Deterrent, or TED, stockings. These are tight stockings that help prevent blood clots forming when a patient is spending a lot of time in bed, like in hospital. She explains how they nevertheless need to be removed regularly:

> *I hate TED stockings to death, because (…) they are extremely difficult to apply. They are very helpful in promoting circulation, which helps preventing pressure ulcers on the legs (…). And they should work perfectly if the staff really checks the skin of those patients or removes the socks and puts them back again at least once or twice a shift. In real life that doesn’t happen. (…) So sometimes we see black lines around the toes or below the knee. Why? Because they don’t have the time to take them down or they just don’t check it or forget about it for some reason. This is the two sides of devices.*

She explains that the stockings need to be removed once or twice per shift, to rest and check the skin. If this does not happen pressure ulcers can develop in the shape of black lines along the tight edges where the stockings press on the skin. Another commonly used pressure ulcer prevention device is a boot shaped pillow with straps that lifts up the lower leg slightly and has a hole at the heel thereby removing pressure off the area most at risk of developing a pressure ulcer. Aline explains how these can also potentially cause pressure ulcers:

> *Same thing with the boots that relieve pressure off the heel; they remove the pressure on the heel, but if it is not removed regularly you're going to start seeing marks on the sides of the feet, so you get deep tissue injuries not on the heel but on the sides of their feet. (…) So it's this false reassurance of okay the device is there, perfect, but you still need to do something, that's the reason there are nurses and healthcare assistants on the wards. So that's the two sides of the story.*

Medical devices such as these boots, TED stockings, and mattresses shape when other actors need to do work to make sure the technologies are doing what they are intended to do and not harming the patient instead.

Places: Shaping where it needs to be done

The promises companies make about their products are overly simplistic. The story of the unplugged bed shows that a lot more is involved, enlisting many different actors; for example, Toni's daughter, who had to be informed and apologised to for the hospital acquired pressure ulcers, the tissue viability team who came to take care of the wounds, the socket, the porters, and the safeguarding team. A third way in which medical devices shape pressure ulcer care and prevention is spatially. Where do things happen? Where are they done? For example, the mattress in the story of the unplugged bed shapes where the work is needed. Aline explains how the mattress moved the work that was needed to include the electrical socket.

> *In fairness, looking at the sockets is probably the last place I'm going to be looking, because you don't even think about it, do you? You look at the face of the patient; you think, it's okay, there is colour, they look hydrated. Let's see if they need to be turned, let's check if they need to be changed, ask if they are in pain, (…) but the last thing you're looking to is the socket, isn't it? Because that is not even part of the patient.*

She explains that she is not surprised the socket was forgotten as a space where care work was needed, because it is not directly connected to the patient. Later on in the interview she explains that every medical device that is used is another thing that needs to be taken care of in order to take care of the patient and keep them safe:

> *Anything that is extra, that you're adding to the body, you need to keep an eye on that. So when it comes to the hospital environment, it's sometimes, or very often, it's not just one extra that you add, like, elderly patients, especially within covid-times, you have oxygen, you have an air mattress, you have a cannula, you have a catheter, you have a pad, (…) you have a hospital bed, the pressure relieving boots, the dressings, the this, the that, the c-paps, it's a lot of things that go all together! But you have to keep attention on those. Otherwise instead of helping, they can do the other way around, they can start damaging. And I think the first level of damage that we see, especially on elderly patients, comes to the skin, it's pressure damage.*

Every medical device included as part of a patient's care needs actors to pay attention to them and make sure they are working. In this way, technologies shape where the work takes place, sometimes expanding it, or shifting it to unlikely places. Taking care of the patient includes taking care of the medical devices taking care of them, distributing the care work needed from the body to the devices.

Actors: Shaping who and what needs to do it

A further dimension to acknowledging just how technologies shape work relates to who or what needs to do the revised activities. In the story of the unplugged bed, for instance, it is suggested the work of plugging the bed and pump into the socket should be done by the porters. They transport patients in a wheelchair or bed around the hospital and back; for instance, when patients need an X-ray. Officially, plugging a bed back in is not their responsibility, but the nursing staff's. However, when investigating the pressure ulcers acquired by Toni described above, Aline suggested porters share the responsibility with the nursing staff because the ward is short on nurses. Following this, a meeting was organised with the porters to discuss it with them: rather than simply removing pressure, the pressure is moved to different actors.

When discussing whether products really can take pressure off staff, Margaret, a managerial nurse, says she does not believe pressure redistributing mattresses do so:

> *I don't think so, because I think it makes it more difficult for patients to move, so you'll still have to turn your patient regularly. You still have to move them as much. Whereas, I think it's*

> *more difficult for the patient than if they were in a standard bed, in which they were able to move themselves a bit more.*

She explains that patients are less able to reposition themselves on this kind of mattress because it is so soft. Consequently, they need nurses or healthcare assistants to help them. Her point is a further example of how the technology shapes who needs to do the work sometimes in unexpected ways. The shift from a foam mattress to a specialised air mattress moves the work of repositioning from the patient to nurses and healthcare assistants, and now also to the porters who have to check it is plugged into a wall socket.

New peak pressures

I have described how technologies shape the ward in a variety of ways, and that the pressure is not removed but moved to new practices, times, actors, and places. In this redistribution, new realities emerge. Here, I draw inspiration from Vogel's (2021) method of analysis by juxtaposition, in which she emphasises the choices researchers make in the process of comparing and contrasting in their messy fields of research. From this I ask: what is different? What do the redistributions (re)produce? Where are the new pressure points? The story of the unplugged bed shows how the high-tech bed shifts attention away from some places and moves it to others. Nurses and healthcare assistants, for instance, are busy checking if the mattress is plugged in, inflated, and behaving as intended, rather than asking the patient on the mattress if they are comfortable. Every medical device added to the space around the bed shifts their attention, rendering new places vulnerable.

One concern with this is that responsibility may move to staff in low-paid roles. Pressure redistributing mattresses, for instance, can result in patients needing more help from healthcare assistants repositioning than on a normal mattress. While porters' and healthcare assistants' jobs were designed to require basic training and are low-paid, they are having to become more technologically demanding. However, their pay and basic training, are not increasing with this expanding complexity of their work. This raises questions about ways in which the introduction of technologies not only reproduces inequalities but has the potential of increasing them further.

Undoubtedly, technologies can contribute to good care and pressure ulcer prevention, and I do not mean to suggest they are intrinsically bad. However, the consequences of moving pressure because of them can mean pressures lump in new and sometimes unexpected places. This new landscape needs to be vigilantly cared for, to prevent them from breaking down. New pressure points require attention and care; perhaps more training is needed, or more staff, or more time. Their adoption also needs critical thinking; is it desirable for the technology to shift pressures this way? What are the politics of this redistribution? Is this what is intended when the technology is introduced?

Conclusion: (Re)Moving pressures

Sitting at my desk at home during one of the many Covid-lockdowns, I speak with Tracey, an experienced tissue viability nurse, in the virtual room that we share. Tracey passionately tells me about a common mistake in repositioning patients for pressure ulcer prevention:

> *You know, one thing will cause another. With pressure ulcers, often people think I want to reduce the pressure somewhere. So they'll do things like elevating the heel. Yeah, stop getting pressure ulcer on the heel, but we don't weigh less because our heel has been elevated. It just means the weight and therefore the pressure has gone to a different part of the body. You know, 'cause we haven't removed the weight of the person, we've just moved the pressure off one particular place. So you know you can take, you can prevent more heal sores by elevating everybody's legs, but you're probably going to cause more problems with people's sacrum's. So again, it's balancing, it's a balancing act.*

Tracey explains that to prevent a pressure ulcer, pressure has to be removed from the area of skin most at risk. However, it is often forgotten that pressure does not disappear, she says; the patient still weighs the same when you lift their heel. Pressure is not removed, but moved to other body parts making those in turn more prone to developing ulcers. But these new risks are often forgotten, or made invisible.

In this paper I have shown what happens when technologies are introduced to care that is under pressure, when ongoing tinkering is not always possible due to time shortages. Similar to Tracey's argument, I have shown how technologies used in pressure ulcer care and prevention do not remove pressure, but move it. They shape the ward in four ways: what needs to be done, when it needs to be done, where it needs to be done, and who or what needs to do it. In contrast to the technological solutionist belief, and the promises companies make about their products, technologies move the pressures on patients' skin and staff, forming peak pressures in new places that escape the normal vigilance. The belief that technologies remove pressures makes these new pressures invisible, and this creates new vulnerabilities. And beyond this, the dynamics of where the pressure moves to can reproduce inequalities. This makes the moving of pressure political.

For this reason, introducing and mobilising technologies to remove pressures should be paired with careful attention to potential new peak pressures. To support staff better and prevent pressures building up, the medical device industry, NHS procurement departments, policy-makers, and NHS staff taking on new products should all ask critical questions about the politics of pressure redistribution. How will this product shape the ward and the work? And: Where will the pressure that this product removes, move to? How can we care for and support this place or person? Where will peak pressures appear next?

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Chapter 6: Discussion: Choreography of pressure

It's a windy day, just warm enough to sit outside in the sun but chilly in the shade. Clouds have drifted in during our interview on a bench outside the hospital. Bianca and I continue talking while our skin develops goosebumps. We talk about the nursing strikes, which at the time of our conversation were still a possibility rather than a certainty.[39] I follow up on a conversation we had had about them the previous week, during which she said she would go on strike if the ballot was positive. I ask her why, and we laugh briefly about the way I phrase it, before she responds in a serious tone:

> *For patient safety! It's a broken system and the expectation for the public is that we can deliver safe care and we can't, so who's going to be accountable for that? Because I'm fed up with people saying; it's fine, we can pile it on top of this, we can cope. Well, we're clearly not coping. Yeah, it's not about pay. It's about patient safety and the safety of my colleagues. It's just madness to carry on. (…) My focus has shifted from patients to staff. (…) Every person is a potential patient. (…) Protecting staff from the injustice; (…) why are we expected just to keep going? And does anybody really understand the complexity of what we do? I don't think so and that frustrates me. We work bloody hard. (…) That's where the anger is.*

A few months after this chat, the ballot achieved a mandate. Eight strike days followed in England from autumn 2022 to summer 2023. This followed a series of strikes by different NHS staff groups (junior doctors, midwives, and nurses) since 2014 (Williams 2022). This nurses' strike was the biggest since the NHS was set up. It was organised at the same time as major strikes in education, rail, and mail in the United Kingdom. Other groups of NHS workers, such as ambulance staff and physiotherapists, were striking at the same time. There seemed to be strikes going on everywhere, sometimes making weekdays look like the weekend with unusually few people in the streets around rush hour.

The nurses' strikes called for fairer pay and improved patient safety. The Royal College of Nursing (RCN) led the strike and negotiated with the UK government to increase pay. Nurses' pay had increased disproportionately with inflation over many years (ibid.), leaving them underpaid. Media coverage of the strikes mentioned nurses unable to afford to feed themselves or their children, having to resort to using foodbanks (Bryant 2023; Baines 2023). In the hospital where I conducted my

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[39] The interview took place in August 2022. The Royal College of Nursing announced the strikes in November 2022 and the first took place in December 2022.

fieldwork, posters were put up directing staff to resources they could access if they were struggling to pay their bills. The RCN argued that the insufficient salaries were disrupting care because nursing has become less attractive as a profession, causing staffing shortages (Williams 2022). Critics of the strikes argued that the strikes were putting patients in danger by leaving hospitals further short-staffed. The nurses, however, argued that they were striking to improve patient safety and that the staffing shortages are already putting patients in danger. After six months, the RCN's mandate to strike came to an end. While smaller strikes in other unions continue to this date, the RCN's new ballot for more strikes failed to reach the required number (Triggle 2023). Although NHS nurses in England got a small pay raise out of the strikes, they did not get close to what they asked for.

The strikes show that the so-called pressures are reaching far beyond the hospital in which I conducted most of the fieldwork for this study. They make me wonder what the strikes indicate. Is the NHS reaching a breaking point? Is a radical shift needed to reduce the pressures on staff and improve patient safety? What does it mean to be talking about pressures in this context? And which solutions do pressures allow for or not?

Overview of the dissertation

In this study of pressure ulcer care and prevention in an NHS hospital, and beyond in the medical device industry, I traced various ways in which the pressure on the NHS can be related to the pressure on patients' skin by engaging with the following research question:

> How does pressure take shape in pressure ulcer prevention and care practices in the NHS and with what effects?

In each of the three papers, I show different ways in which there is mess and disorder in the moving of pressure, how it is lumpy and uneven, and I describe three attempts to organise these messes and cleaning them up. Below I first provide brief summaries before suggesting some linking themes.

Paper 1: '0 days since a pressure ulcer': Navigating blame and learning in the National Health Service

After a series of widely publicised events of patient harm causing public mistrust in the United Kingdom's National Health Service (NHS) around the end of twentieth century, the first of several reports was published about promoting patient safety in the NHS by moving away from a ‘culture of blame’ to a ‘culture of learning’ (Department of Health 2000; Francis 2013; Berwick 2013). The proposed ‘culture of learning’ is one in which staff feel safe and supported so that they can share mistakes openly; for instance, through documenting their work honestly to ensure that learning can take place and mistakes can be prevented in the future.

Pressure ulcer prevention has been given a central place in patient safety improvement through campaigns promoting a reduction of their incidence based on the idea that they are the result of human mistakes, and hence avoidable. Nurses are held responsible and accountable for this. The stakes in pressure ulcer prevention are therefore high for them; in protecting their patients’ skin integrity, they are also protecting their career as a nurse which, in extreme cases, can be threatened by safeguarding enquiries or a Coroner’s Court.

This ethnographic study of pressure ulcer prevention practices in an NHS hospital shows how managerial nurses and tissue viability nurses navigate an ambiguity within the ‘culture of learning’. On the one hand, NHS staff are meant to be as transparent as possible through openness about mistakes. On the other hand, they are expected to do so at a time when public scrutiny, mistrust, and pressures are high, making this unsafe for staff. I unpack how they navigate this ambiguity by showing the ways in which blame becomes unspeakable and individualised, and how tissue viability nurses both resist and reproduce the idea that they and other nurses should carry full responsibility sometimes by arguing it is in their control, and at other times that it is not.

From these observations, I draw conclusions about the position of managerial nurses and tissue viability nurses being on the boundary between policy and practice, both external and internal. The role of tissue viability nurses is to safeguard and protect skin, patients, ward nurses, and policies. The needs and values of these different actors vary between them and across time, meaning the tissue viability team has to constantly move in between different groups’ needs. As significant and valuable as the shift to learning might seem, it does not eliminate blame or the individualisation of responsibility, making it questionable what assessment tissue viability nurses are meant to follow, who and what they are meant to protect, and what they are meant to be advocating for. They are not alone in navigating ambiguities in grey zones between and within the actors within and beyond the hospital Trust. Many other professionals in similarly complex roles have to advocate for too many different values that sometimes clash. While practices of balancing multiple contrasting values and interests are not unique, the case I describe of managerial nurses and tissue viability nurses in pressure ulcer care is a particularly illuminating example because of the scrutiny placed on them to measure pressure ulcer incidence as an indicator of quality more generally.

Paper 2: ‘Slight evidence of avoidability’: Speculative temporalities in pressure ulcer prevention in the National Health Service in the UK

At present, there is a strong emphasis on pressure ulcer prevention in the United Kingdom’s National Health Service (NHS); pressure ulcer incidence is used as an indicator of patient safety and the quality of care in Trusts. A wide network of people and things are involved in preventing pressure ulcers while many factors contribute to their development. Pressure ulcers develop over time, often with a delay between initial pressure on the skin and the ulcer showing or being spotted for the first time. Consequentially, it is not always clear what particular actions or inactions caused a pressure ulcer to develop, or could have prevented it from developing.

In this paper I unpack the pressure ulcer prevention practices of a multidisciplinary hospital team that meets on a weekly basis to reduce hospital acquired pressure ulcer incidence. I argue that hospital staff practices of navigating the uncertainty in prevention are based on a temporal rationale that assesses and examines the past (I call this retrospective speculation) in order to use such information to anticipate and intervene on the future, preventing events such as pressure ulcers from ever developing in the present.

I analyse what this shows us about prevention as a ‘future-orientation’ (Bryant and Knight 2019). I find that in being faced with the challenge of uncertainty in prevention, the team imagines temporally parallel routes of events. On one of these no hospital acquired pressure ulcer develops, while on the others it does. For the imagined route on which no pressure ulcer develops, and it has been prevented, interventions are imagined to have been put in place, good care delivered, and the patient kept safe. This conceptualisation of prevention is one of imagination, and of co-imagination and enabling the conditions in which nurses can prevent pressure ulcers in practice. In doing so, prevention is a concept that folds the past and imagined future into practices in the present.

Paper 3: Removing or moving pressure: The politics of pressure redistribution in bed sore care in the National Health Service

In this paper I unpack the medical device industry’s promise that their products will remove pressure from patient’s skin, the staff, and the NHS, and the widespread belief in this technological solutionist commitment. I contrast the idea of pressure simply being removed with the real-life complexity of pressures moving in a variety of ways and directions. I ask where the pressure is moved to and the consequences of this redistribution.

The central example of the paper is of a specialist bed that was left unplugged in the hospital. The battery of the mattress pump died and the mattress deflated, which caused the patient, who was at high risk of developing a pressure ulcer to begin with, to be lying directly on the hard bed frame underneath. She developed several serious pressure ulcers. In unpacking this event, I approach the bed as an active actor, interacting with other actors. I trace how medical devices like this unplugged bed shape the ward and the work needed; how they determine the practices (what needs to be done), routines (when it needs to be done), places (where it needs to be done), and actors (who or what needs to do it) in the ward. I argue that in moving these pressures, the redistributed pressure concentrates in new places creating new forms of vulnerabilities, because they escape normal vigilance. I unpack the politics of this redistribution of pressure, and argue for greater critical thinking when introducing technologies that promise pressure removal by asking: Where will the pressure present itself next?

In summary, these three papers describe how pressure is constantly pushed, shifted, and moved around by drawing on an ethnography of pressure on skin and the NHS. They have focused on pressure ulcer care in the hospital because it is being used as an index for quality of care, adding further pressures to individuals and organisations. I have no doubt that the dynamic of systemic pressures being connected to pressure on the skin extends to social care too.

I now come back to the questions I posed in Chapter 1 outlining my approach to the study; what does it mean when we think about pressure as a metaphor used to describe the difficulties the NHS is having? What does the pressure metaphor highlight and what does it put in the shadows? Which ways of making sense does it ignore? And which solutions does it open up for or exclude?

Choreography

In paper 1 about blame, learning, and responsibility, I argued that the meaning of 'culture' is unclear in the reports that promote moving away from blame to learning. There are no descriptions of who creates it, or who has the power to change it. I use Jensen's (2008) analysis to unpack this use of 'culture' in several reports about the NHS. The concept of culture is often used to suit political ends. At times, for instance, it is used in racist discourses to refer to characteristics of a group of people said to be fundamentally different, static, and unchangeable. At other times, it is used to indicate something transcending a group of people that unites them together. While it shapes individuals and their behaviour, it, paradoxically, can be altered by the very same individuals.

However, the concept of choreography poses an alternative, more active way of thinking about dynamics within a group. It is most commonly used to refer to a plan for a dance, such as how many dancers are involved, where they move and when, and whether they use props. But recent literature has also used it to refer to an ordering of many other types of activities in diverse networks of actors. It has been used in various contexts, such as in the study of routines and improvisation in teleservice work (Whalen, Whalen, and Henderson 2002), but here I focus on how it has been used in the context of social studies of care and health, such as Cussins' (1996) concept of 'ontological choreography' in infertility clinics, Law's (2010) concept of 'choreography of care' to describe veterinary practice, Thompsons'[40] (2013) concept of 'ethical choreography' in her study of stem cell research, and the similar concept of 'careography' in Navne and Svendsen's (2018[41]) study of decision-making in a neonatal intensive care unit. Similar to these authors, I conceptualise pressure ulcer care and the pressures moving in and through it as a kind of choreography. What does this foreground in my study, and why is this important?

Firstly, choreography collects the wide variety of human and other-than-human actors involved in pressure ulcer prevention and care into a single arrangement. It allows one to group them together by the common denominator that they are all involved with pressure ulcer prevention and care, contributing to this aim across roles, professional hierarchies, and geographical locations. The main responsibility for pressure ulcer prevention and care in NHS hospitals is mostly placed with nurses and tissue viability nurses,[42] who work hard to raise awareness of the risks of developing ulcers and how to prevent them.[43] However, many more people and things are involved in various ways and with various effects,[44] including physicians, healthcare assistants, occupational therapists, dieticians, and other professionals and patients, creams, dressings, medications, cushions, and mattresses.

Actors in the pressure ulcer care choreography contribute in different ways. Some are held more accountable or carry more responsibility or risks than others. For instance, nurses can be called to the Coroner's Court over a patient having developed a pressure ulcer while in their care, while mattresses are never held accountable.[45] In compiling the variety of actors together in one choreography of pressure ulcer care, I do not aim to imply they are equally involved, or the stakes are the same for each of them. Instead, by showing that all these different actors are involved I aim

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[40] This is the same person as Cussins, she changed her name.

[41] Navne and Svendsen's (2018) conceptualisation of 'careography' should not be confused with Orzeck's (2016) 'careography' as a method of visualising caregiving timelines.

[42] See paper 1 about blame, learning, and responsibility.

[43] See paper 2 about prevention and uncertainty.

[44] See paper 3 about technological solutionism, and (re)moving pressure.

[45] See paper 3 about technological solutionism, and (re)moving pressure, and paper 1 about blame, learning, and responsibility.

to support the tissue viability nurses' work of raising awareness of how diverse actors are all in some way responsible for pressure ulcer care rather than it being just a nursing issue. Conducting ethnographic work to identify the range of actors in pressure ulcer care, and talking to the people involved counters some of the neoliberal individualised responsibilisation of nurses (see also paper 1 about blame and learning, for more on individualisation of responsibility). I ask how can so much of the accountability for pressure ulcer prevention fall on nurses, if all these actors share the work?

This brings us to the second characteristic of choreography; it emphasises interconnectedness and interdependency of actors. Dancers are dependent on the other dancers to make their movements, for example, when they lift them up in the air or give them space on the stage. Similarly, the various actors in pressure ulcer care depend upon each other. Preventing pressure ulcers in hospital requires vigilance in routine care practices, such as visually and manually checking patients' skin, making sure the mattress or cushion they are on is suitable for their condition, performing risk assessments, keeping patients hydrated, managing incontinence by keeping them dry and clean, and keeping them moving or helping them reposition if their mobility has been impaired. Many of these practices are integrated with others. A physiotherapist's work with a patient may help prevent ulcers from developing when they help a patient move and shift the pressures on their skin; a dietician's advice to keep the patient well hydrated and nourished may help a pressure ulcer heal more quickly; a nurse talks to the healthcare assistant to ask if they noticed a pressure ulcer on their patient's skin when they wash them; and the skin relies on a cushion to redistribute the pressure.

Actors and practices are interconnected and interdependent, and as such, the pressures are too. The pressures are connected and can shift across traditionally defined NHS hierarchies, and from one actor to another. And when a new actor is introduced, for example a new technology, it needs its own care to remain part of the coordination.[46] Conceptualising pressure ulcer care as a choreography under pressure highlights the many connections, rather than separations. This presents an alternative to neoliberal individualisations and audit thinking which relies on isolating categories of responsibility.

The third characteristic of choreography is its emphasis on routines and local adaptations. Choreography is the plan for a dance routine, or in this instance pressure ulcer care routines. These are important; dressings need to be changed regularly and at specific intervals, patients need to be helped to reposition every couple of hours, nutritious meals need to be served regularly, incontinence materials changed regularly, and risk assessments need to be done within a certain period of time. The routine is about repeating practices at particular time intervals and paired with

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[46] See paper 3 about technological solutionism, and (re)moving pressure.

particular other practices. They are planned, prescribed, and taught. But the choreography also allows, albeit in a limited way, space for improvising to adapt to messy local specificities and constraints. Ideally, patient Z, for instance, might sit up for a couple of hours to have breakfast and read the paper before shifting the pressure building up on their skin by going back to bed. However, a nurse might ask the physiotherapist who helped the patient into the chair to put them back to bed immediately, because the nurse will not have time to help the patient back to bed later that day. The choreography allows for adaptations of the routine to respond to local constraints. In paper 3 about technological solutionism, and (re)moving pressure, for instance, I describe how the tissue viability nurses and the quality governance team find that several incidences of beds left unplugged have been leading to pressure ulcers developing in the hospital. They improvise and think of a strategy to prevent this from happening again in the future.

Improvisation and local adaptations sometimes are in sharp contrast with the rigidity of standardised systems in NHS hospitals. For example, the bureaucratisation of care attempts to improve quality and safety by increasing documentation, thereby creating data. It is based on the idea that through data comes learning and improvement. However, documentation usually needs to be done using standardised boxes to create comparable data, contrasting with individualised care that has to adapt to messy local circumstances. This contrast in values between standardised bureaucratisation and localised care, was not only present in pressure ulcer care in the hospital, but also in a similar tension I experienced in the ethics application for this study.[47] In both cases, the documents that need filling and the boxes that need ticking actually shift attention away from the patient, the care, or what is good or ethical in particular situations.

Finally, choreography highlights the continual work that goes into organising complex arrangements. The local adaptations sometimes feed into the work of (re)ordering and coordinating the actors and practices in space and time. The concept emphasises and makes visible this work of crafting (Whalen, Whalen, and Henderson 2002). It happens in a particular local setting, and is ongoing work, as the actors, allowances, and constraints of the environment change. For instance, the guidelines for pressure ulcer prevention and care may change, or a new product for pressure ulcer prevention comes to market. In paper 2 about prevention and uncertainty, I show how pressure ulcer prevention practices are organised and reorganised in team meetings, during which pressure ulcers are investigated and lessons are drawn and implemented to prevent them from happening again. And in paper 1 about blame, learning, and responsibility, I show how much organising happens when trying to implement a ‘culture of learning’ into pressure ulcer care.

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[47] See Chapter 2 about how I did research.

In summary, conceptualising pressure ulcer care and prevention as a choreography, in which pressure is constantly building up and being shifted, emphasises interdependencies between a variety of human and non-human actors connected in a wide network, their routines and adaptations to specific situations, and the constant work that goes into organising and planning these practices. This counters neoliberal and audit thinking which rely on the separation of categories of responsibility. By showing how the wide variety of actors share pressure ulcer care and prevention work, I raise critical questions about the responsibility being placed on individual nurses. And it contrasts the space needed for improvisation to provide good care, with the small boxes that need to be filled out in audit and management documents.

The idea of choreography also leads to new insights. I started this study and dissertation with a separation of metaphorical and practical pressures. By metaphorical pressure I meant pressure that is invisible, intangible, and abstract, while practical pressure referred to pressure that is visible and tangible. In studying the pressures in the NHS and pressure ulcer care, and conceptualising them as a choreography, I have found the distinction between the two is blurred and unhelpful. Pressure ulcer care and prevention shows how pressures on the broader health service, such as financial pressures, and staffing shortages, can be traced directly to pressures on the skin causing ulcers in patients. In turn, pressure ulcers put pressure on the health service, because they require additional care. Another way of putting this is that, in my study, I have found that pressure on the NHS is pressure on staff, is pressure on patients, is pressure on skin, is pressure on staff, is pressure on the NHS. The different pressures are connected and cannot be distinguished clearly. As pressures rise there are efforts to reduce them locally, but pressure cannot, however, disappear. Instead, it is absorbed and potentially does damage, or it pushes people to improve things, or it gets pushed from one place to the next, unequally distributed, and lumping in certain places and not others.

I am aware that conceptualising pressure ulcer care as a choreography risks presenting a romanticised picture of dynamic harmony, stability, and things going according to a prescribed plan. But choreography of pressure ulcer care refers not only to the work that goes into attempting to create structure or routine, but also to the need to improvise and respond immediately to messy local situations and unexpected actors. It additionally draws attention to how this results in pressure ending up in particular places, for example, shifting onto the porters.[48] The pressures in Hospital B were so high that oftentimes things did not go to plan but were breaking down. At times, hospital staff had to improvise so much that collaboration, balance, and the planned choreography were hard to find. This raises questions about how much pressure in the choreography is too much. Where are the limits to its flexibility? When does it collapse entirely? In the next section I consider where the

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[48] See paper 3 about technological solutionism and (re)moving pressure.

limits of the choreography of pressure are.

Caving in to pressures & the pressure metaphor

During our chat on the bench in the wind, Bianca reflects on how things have changed over time in pressure ulcer care and prevention.

> *Locally, it's become harder and harder with the staffing levels. I think Covid has had a big impact on morale, stress levels, burnout, and I think it's becoming increasingly difficult to function in a broken system. We can see the fatigue in everybody. (…) We always moan about it (…) but now it feels properly broken.*

Similar to the argument from striking nurses, Bianca explains how the pressures are higher than before and that the system feels broken. Are the nurses' strikes in 2022 and 2023 indicating that the choreography is falling apart?[49] The striking nurses argued the pressures on the NHS were preventing them from keeping their patients safe. The pressures nurses are working under are wearing them down, reducing their flexibility and adaptability. In this dissertation I have shown how the pressures are shifted around in the choreography, but that they often lump in some places. They get stuck and cause skin, and other elements, to break down. Too much pressure can mean recovery is difficult and sometimes impossible. Perhaps there are limits to the number of adaptations that can be made and this has now been reached. If the system can no longer function maybe a shift is needed to create a new approach based on different assumptions.

One way to approach this is to move entirely away from the narrative that the NHS is under pressure. The metaphor serves many useful purposes by highlighting problems and connections between them, as I have outlined in this dissertation. However, there are also downsides to it. Metaphors, like pressure to describe the problems in the NHS, highlight parallels between two seemingly unrelated concepts. In doing so, they make other aspects invisible. The metaphor of pressure in the context of the NHS has become mainstream. While initially a creative comparison, it loses its creative and symbolic qualities as it becomes normalised. The metaphor becomes the only way people think about a problem. In this particular topic there is now a 'pressure-verse', where every problem is thought of as a pressure and every practice, person, or thing is either relieving or piling on pressure. Consequently, the debate about problems and solutions becomes constrained.

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[49] The idea that society is deteriorating and decaying is a dominant contemporary narrative, see Hage (2021) for an elaborate analysis of this narrative.

Additionally, the lack of diversity in metaphors to describe the NHS and its problems leaves the debate about potential solutions stranded and stuck. The pressure metaphor may allow for thinking about pressure relief and redistribution, but redistribution or relief to where? Private companies? Staff in new roles that require less training such as healthcare assistants? International recruitment? And what are the local consequences of this? Where is the pressure moved to? As long as the pressure metaphor dominates descriptions of problems in the NHS and possible solutions, it should be kept in mind that pressure cannot dissolve or disappear, but are moved and may cause breakdown somewhere else.

While the pressure metaphor highlights important problems, a diversification of metaphors used to describe the state of the NHS and pressure ulcer care would bring the idea of movement into the discussion. In this dissertation I have used many different metaphors and idioms to describe the parallels between the problems in the NHS, pressure ulcer care and prevention, and the effects of pressure on skin, including peak pressures, sore points, pressure points, weepy wounds, leaky systems, permeability, lumpiness, and patching up. I heard and saw these metaphors in the fieldsite and discussed them with people like Bianca. Metaphors are part of how we all make sense of the world, but by using only one, rather than diversifying, we can only make sense of the work in one way. I take inspiration from Baraitser's (2017) study of different ways of being suspended in time when time is not passing or flowing. She thinks with different versions of the general idea, such as staying, maintaining, repeating, delaying, enduring, and remaining. Similarly, what are the different versions of pressure? Perhaps metaphors such as shortages, abundances, and entanglements would open up the debate, offering creative opportunities to get the choreography of pressure ulcer care unstuck.

Policy and practice

Alongside a rethinking of the pressure metaphor, what else did I learn in this project that can help policy and practice? Interlocutors frequently said they were hoping I would find 'the silver bullet', by which they meant I would develop a key solution to pressure ulcer development. While I explained that this was a different type of research and I would not be offering clinical advice, I could make recommendations on how care is arranged. After completing most of the writing, I presented a set of learnings with matching reflective questions to various teams in Hospital B. These presentations and the responses from members of staff to them inform my recommendations for practice and policy.

Conceptualising pressure ulcer care practice arrangements as a choreography served the purpose of highlighting the connections between the various actors involved in pressure ulcer care, including nurses, health care assistants, physiotherapists, patients, mattresses, and dressings, and how they depend on each other in messy ways. In the current NHS system, this mess is organised into hospital hierarchies that are reflected in the separation of roles and the practices assigned to them. Nurses carry responsibility for pressure ulcer prevention and care and they are held accountable for it. There is a lot at stake for them individually, with the threat of Coroner's Court lurking around the corner. While they work hard to activate other actors to do their part, pressure ulcer care remains less pressing for members of staff who are not nurses as long as policies on accountability for pressure ulcers do not support this work. These policies need to change to support the ever changing nature of pressure ulcer care in which actors dynamically adjust to each other rather than the rigid separation of tasks and responsibilities. Until they do, members of staff who are not nurses often feel like they are doing nurses' work by engaging in pressure ulcer prevention practices. Rather than asking how they are taking over part of nurses' work, they could take responsibility and ask themselves: How is pressure ulcer prevention part of my own work?

One of the keys to getting various actors more involved might be to develop new ways to celebrate hard work and successes in pressure ulcer prevention. By using pressure ulcer care and pressure ulcer incidence as an indicator, the work being done to prevent pressure ulcers is invisible: measurement of pressure ulcer incidence is the measurement of a negative outcome. All the prevention work done with patients who may or may not develop a pressure ulcer is not visible in these measurements. The measurements and data are very important to the health care system and great value is placed on them. In Hospital B I saw many attempts at showing and valuing the prevention work itself as well, celebrating successes. However, they are still a celebration of 'outcomes' not of 'prevention work done'. In crafting new ways to celebrate prevention work, I recommend keeping in mind the following reflective questions: What do the data we present make invisible? Is this what we want? Do we want to celebrate 'results' or 'hard work and effort'? How may the things that cannot easily be measured be acknowledged and strengthened?

Finally, a note on technological solutionism. Technology is often thought of as one of the main solutions to shortages in the NHS. Promises are made by policy-makers and the medical device industry that it will relieve the pressure off patients' skin as well as off staff and off the system. However, the pressure does not disappear but moves to other places. Pressure on the system and the staff is redistributed, just like the pressure on patients' skin. The pressure can be redistributed to obvious places in the system, for example the financial costs of the technology being a pressure, but also to more overlooked places, such as healthcare assistants having to learn how to use high tech pressure redistributing beds, how to maintain them, and how to respond to their alarms. The redistribution is messy. It forms new peaks and sometimes lumps in unexpected places that escape normal vigilance. There are power differences and politics in this redistribution of pressure. This means it is important to think about the consequences of this redistribution and what it should look like. Policy makers and members of hospital staff should keep this in mind when considering implementing new technologies. They can ask: Where does the pressure I am redistributing with this technology go? Where will the pressure present itself next? Is this what we want?

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