

The COVID-19 pandemic: Analysing nursing risk, care and careerscapes

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Abstract

This qualitative study explores how junior nurses, and some who were still in training, navigated the complexities and uncertainties engendered by the COVID-19 pandemic. Data are drawn from in-depth interviews with 18 students/nurses in Christchurch, New Zealand. Managing intertwining risk, care and careerscapes takes an intensified form as existing infection control rules, established norms of care, boundaries between home and work and expected career trajectories roil. 'Safe' and 'risky' spaces are porous but maintained using contextual, critical, clinical judgement. Carescapes are stretched, both within and beyond the walls of healthcare settings. Within the COVID-19 riskscape, careerscapes are open to both threat and opportunity. Countries demand much of their healthcare staff in times of health crises, but have a limited appreciation of what it takes to translate seemingly tightly bounded protocols into effective practice. The labour required in this work of translation is navigated moment by moment. To surface some of this invisible work, those implementing pandemic plans may need to more carefully consider how to incorporate attention to the work/home/public boundary as well as overtly acknowledging the invisible emotional, physical and intellectual labour carried out in crisis risk, care and careerscapes.

KEYWORDS

epidemics, nursing practice, qualitative methods, social theory

1 | INTRODUCTION

As cases of COVID-19 began to be detected in New Zealand, there was a high level of concern that hospitals would be overwhelmed with critically ill patients. The New Zealand government implemented a national four level alert system from 21 March 2020 that restricted people's movements outside their homes. The highest level of restrictions applied from 25 March with partial relaxation from 27 April and further relaxation on 13 May. Restrictions ceased on 8 June 2020 apart from controls at the international air and sea borders. There was one return to higher alert levels in one part of the country due to a small community outbreak from August to early October and several even shorter returns in early 2021. The response is internationally recognised as successful, to date. However, it was far from

clear at the time how effective it would be and whether New Zealand would experience the extreme stress on hospitals that was projected to happen, and did in fact happen, in some other countries (Moghadas et al., 2020; Nacoti et al., 2020).

As a matter of course, healthcare spaces grapple with infections of many types and they have existing strategies to try to control infection-causing pathogens (Dancer, 2014). Early experience of the pandemic overseas showed that healthcare workers were particularly at risk because of their exposure to high viral loads (Gómez-Ochoa et al., 2021; Kambhampati et al., 2020). Working with assumptions about the behaviour of already-known similar viruses, New Zealand hospitals and community-based health services restricted access and subdivided their interior space to separate those who may have COVID-19, from those considered 'safe'. This spatial ordering was

guided by existing pandemic plans (e.g., Canterbury District Health Board [CDHB], 2018), before and during the highest level ('the lockdown') of restrictions. Staff carefully vetted, restricted and in many cases denied visitor and supporter entry (CDHB, 2020; Martin, 2020). Outside healthcare settings, educational establishments moved to distance learning and people other than essential workers were required to stay at home unless going out to access healthcare, food or exercise. The success of the arrangements put in place to try to limit or halt the spread of disease are in many ways a spatial accomplishment (Mesman, 2012), but one that is much more complex and dynamic than might be immediately apparent.

In a global pandemic, managing risks and risk perception is important not only for the public but for the front line health workers, on whose availability, willingness and continued well-being the effectiveness of the response depends (Gee & Skovdal, 2017). Yet in the constant flow of new information that emerged about the behaviour of the virus (Eysenbach, 2020), the ability of those in authority to design, communicate and implement new codes of spatial order effectively was inevitably compromised. Policies and procedures changed rapidly, resulting in uncertainties and varying interpretations about what should be done within and between these separate spaces (Durodié, 2020; Salvador-Carulla et al., 2020). Clinical staff navigated equipment availability, supply chains and efficacy; for example, there was ongoing conflicting evidence internationally about the efficacy of mask use for the public and healthcare workers (Chughtai et al., 2020; Greenhalgh et al., 2020; Islam et al., 2020).

In this paper, we examine how 18 participants in a longitudinal study following students and then graduates of the University of Otago, Master of Nursing Science (MNSc) qualification. The MNSc is a postgraduate course open to entrants who already have a university degree in any discipline, and wish to gain a nursing qualification. The qualification runs for 2 years full-time and students graduate as both registered nurses, on successful completion of the New Zealand Nursing Council State Final examination, in addition to having a Master's degree. The participants were from two cohorts of the MNSc. We interviewed participants annually from the end of their first year of study, aiming to track their trajectory through the course, their entry into the health workforce and their early experience of working as a registered nurse. This paper reports on data generated from the 2020 interviews, during which we also asked questions about experiences of studying and working during the pandemic.

1.1 | Conceptual framing

Conceptually, this paper sits between social constructionist, relational, and more than human geographies as they relate to healthcare, health professionals (Andrews et al., 2021) and a new pathogen. We use the intersection of various 'scapes' as an overarching concept to help make sense of the ways space, infection risk and profession are performed in this COVID-19 moment. The concept of riskscape (Müller-Mahn et al., 2018) is relational, not automatically negative,

and helpful in thinking through the ways that though spaces of healthcare work with specific understandings of the concrete risk of infection, the way this risk is managed in practice is fluid and ambiguous. Hinchliffe et al. (2013) discuss the 'will to closure' which involves border construction designed to wall off or exclude infective agents, but note the limits to such 'closure'. They argue that borders are also always contact points that 'join worlds together' (p. 535). Seemingly hard borders are then porous, relying on people navigating within, between and beyond, rather than simply following bounded spatiotemporal rules about infection risk and control—although it is about this as well. Whilst healthcare settings always have some elements of the 'riskscape' about them, in the context of COVID-19, they become crisis riskscape and in so doing become somewhat more unpredictable.

Hospitals and other health services are also formal 'landscapes of care' (Milligan & Wiles, 2010) or carescapes that involve close, 'bodywork', particularly on the part of nurses (Wolf, 2014). While not all landscapes of care rely on close proximity to offer meaningful care, in these formal settings there is a continual tension between the close human interaction involved in looking after the sick in healthcare settings while managing, in this case, pathogens as a risk that may be transmitted among the carers and the cared for, which in some cases, can involve distancing (Buse et al., 2020). Under normal circumstances this tension is kept in check, rather than eliminated, by infection control protocols and practices, including the use of personal protective equipment (PPE), and behaviours, such as frequent, thorough handwashing, that aim to kill pathogens and prevent their transmission (Hessels & Larson, 2016; Mitchell et al., 2019; Nasiri et al., 2019; Streefkerk et al., 2020). The COVID-19 pandemic however, disrupted these existing 'narratives of order' (Hulme, 2020) and unsettled established health workplace practices.

Drawing on Hinchliffe et al's (2013) insistence that borders are also contact points, we argue that the crisis risk and carescapes in which our participants were enrolled extend beyond the walls of the healthcare settings in which they work. The between and beyond of these scapes bleed into and interact with personal lives, the public sphere and careerscapes (McKie et al., 2013). Only a 'topological sensibility' (Hinchliffe et al., 2013) provides space to tease through the interconnected, nonlinear, threads that link profession, space and virus.

1.2 | Methods

At the time of the July–August 2020 interviews most of the 18 participants (nine from each cohort) in the study had graduated as nurses and were employed in the New Zealand health system. Most of the graduates were working in hospitals though several were community based and located in primary care or outreach settings. All participants were interviewed by Lee Thompson, either in person or by Zoom depending on their current location and preference. Interviews were semistructured and based around broad topic areas, including clinical and other experiences since the last interview, how

perceptions of nursing may have changed, specific experiences related to COVID-19 and plans and aspirations. The interviews were audio-recorded and transcribed verbatim and participants offered a NZ\$30 voucher in recognition of their contribution. The University of Otago Human Ethics Committee granted ethical approval; approval number: D17/131. We analysed the data inductively within a constructionist epistemology. The thematic analysis was guided by Braun and Clarke's (2006) method of familiarisation, sequential coding and code amalgamation until we identified overarching themes. For the purposes of this paper, we were interested in material related to COVID-19. Spatial themes were identified as a result of our thematic analysis and it is these that frame the paper. We used theoretical concepts to deepen and broaden the data analysis. To preserve confidentiality, excerpts taken from participant interviews are identified by either one for those from the first cohort, two for those from the second cohort and T if they were still training. We do not provide any other demographic details due to the relatively small geographical area and cohorts participants were drawn from.

In this paper we examine the way the participants negotiated their way through the COVID-19 riskscape as new, relatively junior, or still student nurses. The first section looks at perceptions and experiences as nurses performed their clinical roles negotiating space divisions. In the second section we turn our attention to the complex issues for the participants as they moved across the borders between their clinical work, the outside environment and their homes. In the third section we examine the effects of the spatial divisions on the participants' professional development as nurses; the unexpected opportunities that opened up in some workplaces and the shifts in power that occurred.

2 | RESULTS

2.1 | Clinical risk and carescapes

The health system response to the pandemic was guided by existing pandemic influenza coordination plans. This response was wide-ranging but for the purposes of the discussion in this paper involved managing admission to hospital and patient movement through both community, primary and secondary care services differently. Bounded spaces were created to separate those assessed as safe (likely free of COVID-19) into 'green streams' and those deemed risky (possibly infected with COVID-19) into 'red streams'. The majority of participants in the study were working in hospitals or other health services with space restrictions of this kind:

... the Clinical Director at the time and the Infection Control champion actually worked quite closely together and they created this system where parts of the hospital was a green zone, which means that anyone who may possibly have Covid or contact with Covid are not allowed in there basically ... which worked quite well and good considering it was implemented in such a short time. (1)

Participants understood the practicality of setting up these space divisions. However, at the operational level where the participants worked and interacted with patients and one another, 'the assumption that a pure space can somehow exist in contrast to an impure diseased space' (Hinchliffe et al., 2013, p. 531) proved to be complicated by uncertainties. In the initial stages of the pandemic in New Zealand there was uncertainty about, for example, criteria for COVID-19 testing (Davidson, 2020). Participants spoke about the confusion around the meaning of the various policies and the negotiations that took place between clinical areas about their respective responsibilities:

... there was quite a lot of confusion around who got swabbed [given a test for COVID-19] and whether it was appropriate that someone got swabbed, and generally it was the nursing staff that were pushing onto the ED [emergency department] staff, saying they need to be swabbed before they come up to the ward. (2)

Even if a patient was swabbed before being sent to the ward, results of that test were not instant, meaning the patient sat in a liminal space. In this space, patients were treated as infected until shown to be otherwise. The management of patients in limbo was very complex, particularly in settings with limited isolation facilities and in situations of urgency where conditions unrelated to COVID-19 needed to be treated. In that case, while a particular ward may be the best usual place to admit a patient, there was a need to determine where such patients should go as an alternative, so that they did not infect others:

... initially ... a lot of confusion ... if this person needs to be as a suspect case, but also needs to be treated, we're going to treat them. But they're also risking the rest of the ward really because there's very, it's limited in how much we can really isolate someone without negative pressure [a space in which air flow is controlled so as to help contain contaminants] or anything, ... all the little arguments and things, so we should be doing things this way. (1)

In addition to the red and green streaming, participants reported that their workplaces separated clinical staff into 'clean' and 'dirty' teams that were supposed to work only within one zone alongside the same group of colleagues. As with the red and green zones, however, separation of teams was difficult to maintain consistently:

... I had one query Covid patient because I think a parent worked at the airport and then they said, 'Oh well, if you're already the dirty nurse, can you take the other ones?' So I was up to four patients, and the other nurses only had one, and they were all just

sitting down, and I asked for help ... I felt that sort of put me in a difficult position 'cause I was kind of not following policy ... (1)

...[it] kind of defeats the purpose of that whole red zone/green zone separation.... someone could present with a cough and then we treat them as Covid, until proven otherwise, but then the next day I'd still be allowed to work in the ward. ... It's just that we're so short-staffed that it was no way we could just separate from each other. (1)

The clean/dirty separation was in some ways more easily applied in specialist areas, such as community outreach, where teams could work week and week about without coming into contact with each other, though they were still going in and out of patient's homes:

They split ... into two teams with one going on base and one working from home, and they'd switch each week. And the idea behind that was obviously there's less people, so less chance of physical contact type thing. (1)

In addition to the examples above of porous boundaries, there were also obvious points of physical convergence as staff used the same equipment:

...there was no way in our job you could safe-distance because all of us were using the exact same computers in the office. So, there's so many staff, and we weren't on a set roster, so I worked with a different staff member each day, and especially when you're full-time and you're there so often. If I had it, then most of the hospital would have had it. (2)

To achieve continued protection in these spaces of convergence, enhanced hygiene practices and the use of PPE are usually employed. Some, but not all, participants spoke about issues related to PPE supplies. During March and April 2020 there was a worldwide surge in demand for PPE and New Zealand was caught up in a supply shortage (World Health Organisation, 2020a):

So, you know, one day we'd be wearing masks, the next day it got ruled out that we weren't wearing masks, the next day, you know, PPE was low. (2)

Participants reported that what was available in some workplaces was further depleted by theft. These thefts were widely reported in the general media, with health professionals pleading with the public to leave the available supplies for those who needed them the most (Anonymous, 2020; Heywood, 2020; Sherwood, 2020):

...there wasn't enough masks, there wasn't enough gowns ... it was a bit of a nightmare, to be honest. ... I

think they got a new couple of more boxes of masks and they'd put them out on the ward, but I think there was also an issue where people were stealing them and they were going missing and things like that. (1)

Policies about what could be used and when and what processes should be followed were dynamic and driven by new discoveries about the behaviour of the virus, emerging evidence about such things as mask efficacy, and issues with PPE supply. Participants were often unsure which measures were current and which had been replaced; an issue further complicated by a lack of in-person meetings:

There were lots of emails, but then also there wasn't a lot of time to read emails. a lot of our usual meetings couldn't happen. ... we didn't do the morning ward round, quick hand-over of all the patients with the whole team, we didn't do that. (1)

Moreover, changes might take effect without warning. One participant gave an account of coming to work and finding that her workplace had changed overnight into an assessment unit for those arriving at the hospital. This changed designation required different procedures and equipment, so involved different ways of working. This happened without any 'meetings or anything to kind of, I don't know, go through the whole new processes and everything' (1).

Throughout the first phase of the pandemic in New Zealand, the workplace became a continually changing and unsettled riskscape where spaces were continually being remade (Hooker et al., 2020). Everyone inside was a potential risk to everyone else they came into contact with, whether they were staff, patients or the few visitors allowed in. The ongoing attempts to maintain boundaries between the spaces by defining practices and procedures were undermined and complicated by the rolling daily changes and the need to undertake the core clinical work for which these workplaces existed. None of the comments above are intended to imply that there was anything necessarily wrong with attempts to demarcate spaces and segregate those deemed at risk of having and spreading infection, in fact these strategies are necessary. But, the ways participants talk about the difficulty in enacting boundaries shows how the application of principles of segregation requires contextual, critical, clinical judgement, in the moment, to try to get to the intended outcome of reducing the risk of contagion, at the same time as providing optimal care. The work involved in bringing boundaries into being, patching them and managing when they cannot be anything other than porous is a never-finished spatial accomplishment that extends beyond the walls of healthcare buildings.

2.2 | The convoluted COVID-19 carescape

Carescapes are always convoluted, but encompass specific elements in the context of the crisis riskscape. These elements are to do with moving between home, work and the public sphere and the muddling

of functions of home, family and work. The limits on movement set by the New Zealand government to keep people apart during the lockdown included the closure of most businesses and places of work, apart from essential workers. Nurses were, of course, deemed essential workers. In the New Zealand context, healthcare staff were free to go back to their homes at the end of their workday. This movement took on a different significance to what it would have had in non-COVID-19 times, as it did for many essential workers. Electronic connectivity had already undermined the idea of separate 'work' and 'home' spaces (Butts et al., 2015; Ter Hoeven et al., 2016), well before the pandemic accelerated the process. Nursing due to the nature of the work, retains somewhat more clear boundaries around being at work in a clinical space and being at home away from that clinical work. Though participants in this study did not take their clinical work home in anything other than a metaphorical sense, the uncertainties around COVID-19 and its mode of transmission highlight in a different way the limits of these spatial distinctions and reveal the complex threads that connect work, home and public spaces.

The early recognition that healthcare workers were at higher risk of acquiring the infection, implied that nurses could be vectors for spreading the disease, not only inside the clinical space but to anyone they came into contact with outside, including and especially their own households (Gómez-Ochoa et al., 2021). The daily transit between the workplace and the outside environment loaded healthcare staff with extra responsibilities as they needed to attempt to protect anyone they lived with from infection that may have come home with them. They also needed to try to avoid being exposed to the virus in public settings, such as supermarkets, and unwittingly taking the virus back into the healthcare settings they worked in:

... for some people, that boundary between work and home became pretty complicated because they, you know, the ones with people at home, they had to think about what they were taking from A to B. (1)

The participants had diverse living arrangements each with its own complexities. Some were in a household with family members, others with flatmates, and some lived alone. Returning home was not solely a move into a place of rest and refuge for them but one for which preparations needed to be made before entry. Nurses and their clothing have long been viewed as potential vectors for spreading hospital acquired infection (Babb et al., 1983; Lakdawala et al., 2011; Loveday et al., 2007; Perry et al., 2001; Sanon et al., 2012). Participants adopted or intensified procedures for preventing contagion (Halliwell & Nayda, 2011) and gave accounts of changing their clothes, shoes and showering, or at least handwashing, as soon as they arrived home and before they interacted with anyone else:

... simple things like shoes, I never wear them even inside my car, because I don't want my car to be a red zone ...And which I've always done since the very beginning anyway, because I know that it's not just

Covid. There's a lot of bacteria in a hospital. You get everything that could possibly exist ... I live with parents who are in their 50s, 60s ... (1)

Physical contact with those not in a family group or workplace was severely restricted during the lockdown. Living alone, while it did not entail the physical work needed to try to keep others safe, had its own responsibilities and could also take an emotional toll (Restubog et al., 2020):

When you go home, you're all by yourself and looking at the walls. It was difficult, difficult in that sense where like there's so many things happening in a day and so many changes and you have no one to talk to except, well you call your family, video call them, but then again, you don't want to leave them stressed by saying, 'Oh I'm not coping with this and that'. So, you have to put a brave face, like brave face at work and brave face at home, yes. (2)

More complex situations arose where the participants were involved in community-based, outreach or taking a specialist visiting service into other forms of residential care. In the course of one day, they might go from home, attend their base workplace and then visit a number of other locations:

...we'd always screen people before you went to their house ... for a few people, we'd basically wear a full gown and just be ... even more cautious than usual around how that worked. And you know, basic hand sanitizer every step of the way and would wipe down the cars at the start and end of each day. ... not fool-proof, but pretty, pretty good. (1)

Alongside concerns about disease transmission, functions of healthcare space and home became transposed as clinical spaces took on some aspects of surrogate family roles for patients who were unable to have visitors. It was difficult to meet expectations when policing the boundaries of who could stay and who must go. For example, the special purpose hostel for parents or caregivers of paediatric cancer patients was closed because of the pandemic. Normally the adults would have stayed there and been able to come and go at will. During the lockdown however, only one caregiver was allowed to stay with the child in the hospital. This was difficult for both staff and the families:

... children were just allowed one care-giver. ... So, the parents were stressed 'cause they didn't have their own support. ... I think a few parents complained to our charge nurse, which she just had to say, 'I'm really sorry. This is where we've all found ourselves right now. We just have to keep up with what's happening and stick to the rules'. So yeah, yeah, that was hard. (2)

Just as hard was turning families away from being with seriously ill or dying relatives, as was and remains the case in many parts of the world (McKenzie, 2020):

I deal with palliative patients all the time, but I found I could digest that better than I could telling the husband, 'No, you can't come and see your wife'. (2)

As has been widely reported in media internationally and in academic publication (Negro et al., 2020), individual staff made an effort to overcome this separation in the final hours and minutes of a relative's life and substituted where they could for the absence of family support:

The house officer was talking to the family and said, 'Look, I'm really sorry but he's passed', and they were still outside of Christchurch, and she actually Face-timed him and was able to show the son the parent who had passed away, and so there was kind of that connection, but it was up to the staff to actually offer that. (2)

Clinical settings became a surrogate source of social contact for staff whose leisure activities had closed down (Selman et al., 2020; Voo et al., 2020). One participant who had a family bereavement right at the start of the lockdown and was not able to be with family or enjoy usual activities, found time off to be bleak. At work there were colleagues who offered the emotional support and social interaction that was otherwise unavailable:

... not being able to be with the family and just not having my outside things... it's just it was kind of all work and work was really hard...I mean everyone was really supportive at work and we were all supporting each other kind of thing 'cause we had to. (1)

We always had like conversations about how someone's feeling. ...How's the family doing? How's everyone coping? ... the staff were then getting more into baking something for everyone for morning tea, so that kind of thing, yes, it was there in those times. That kept us going actually, yes. (2)

It could be argued that concern for colleagues is not and should not be confined to times of crisis, but it does take on a special significance in that context. Bringing the carescape into being within the wider context of the crisis riskscape involved both emotional (Huynh et al., 2008; Stayt, 2009) and physical labour on the part of nurses as they worked through trying to protect and care for themselves and others both inside and outside of healthcare settings. The carescape is important in helping make crises bearable, as well as simply lessening infection risk. Pandemic plans often include the need to monitor and protect staff well-being both during and in the recovery

phase of crises, but much of the kind of care labour discussed in this section is relatively invisible. Some of this labour may be recognised in very proximate ways by those on the receiving end, but when nurses take their professional identities and stretch the carescape beyond the walls of the healthcare setting, this work is invisible but likely assumed and expected. Nevertheless, out of the confusion and the extra emotional burdens of responsibility that the participants reported, new opportunities arose. The time of the lockdown became for many of them, a period of positive professional development in the careerscape.

2.3 | Navigating careerscapes

Riskscape—even crisis ones are never simply negative spaces. The paradoxical nature of crises which threaten extreme danger on the one hand but also give rise to break-through developments and new discoveries and opportunities is well documented. Major advances in emergency care, for example, have come from treating battlefield trauma (Allison & Trunkey, 2009). Previous disease outbreaks have generated positive improvements in public health systems (Gilpin et al., 2020; Mead, 2017; Mullen et al., 2006) and the potential for new learning and renewal from the current crisis has already been raised (Blecher et al., 2020; Iyengar et al., 2020) as riskscapes collide with careerscapes.

On a practical level, the spatial restrictions meant that those few still completing the programme because they had dropped to part-time the year prior had to manage changes to their training as learning moved on-line. Clinical placements are a fundamental part of the MNSc programme. During the 'lockdown' the Chief Nurse of New Zealand made the determination that students were not allowed to be in clinical practice. As a result, all the participants who were still completing their training considered themselves lucky to have either just completed clinical placements or be already scheduled to go to them after the lockdown. Not being able to complete these clinical hours would have meant significant delay to completion of training and is an issue internationally (Ford, 2020; Tomietto et al., 2020). Yet there were still challenges in learning clinical skills. Some clinical skills are first taught in a simulated setting:

...the simulation didn't happen. Well they tried to do them as much as possible via Zoom ... but you can't really practise any practical things ...personally I feel I learn a lot better doing hands on stuff in the actual situation. (T)

Some of the part-time students found on-line study challenging due to childcare being unavailable. This lack of availability was because childcare centres were only open to children of essential workers. Extended family caregivers were unable to perform this role under New Zealand's spatial restrictions that confined people to 'bubbles' containing only those usually resident in their households. Some trainees usually travelled to their classes from quite some

distance. These people, so long as their children were somewhat self-sufficient, valued the ability to continue studying nonclinical aspects on-line from their homes.

Newer graduates were enrolled in Nursing Entry to Practice Programmes. These programmes consist of extra support, learning and mentoring during the first year of clinical practice. Some sessions moved online but not in any comprehensive way. Participants from this cohort acknowledged that it was not realistic to expect their programmes to continue normally and largely regarded the delays as temporary inconveniences rather than critically detrimental to their career progression. There were some unexpected advantages. One participant during this period worked alongside a senior 'super-numerary' nurse who had been assigned in the expectation of a heavy workload. Although the anticipated surge in demand did not materialise, this senior nurse was able to remain for 6 weeks and was always ready to offer guidance and help to several very newly qualified nurses:

... me and my colleague, who just started, were so thankful for the NIV [non-invasive ventilation] nurse. ... we'd be drowning a little bit, but the NIV nurse was always there ... they understand, they get two new grads every six months, so they totally understand what it's like to start, and obviously a bit different during a pandemic. (2)

The pandemic had a levelling effect on expertise in that everyone, from experts in infectious disease to the newly qualified health professionals were in the same uncertain space, learning about the virus as more became known over time:

I guess you just had to be really adaptable 'cause we literally didn't get any notice, so we just came to work ... I feel like we adapted quite well, I guess, 'cause we had a team that we knew everyone, so we could kind of ask questions together and learn it together, which was a bit easier. But still it was quite, yeah, quite busy and quite a lot to learn at once. (1)

Nurses were not only more vulnerable to infection due to their closer contact with infected patients, but some nurses were potentially even more vulnerable due to older age and particularly the presence of comorbidities (Kambhampati et al., 2020; Romero Starke et al., 2020). Part of health authority pandemic management was to consider how potentially vulnerable staff should be best deployed (CDHB, 2018). In some cases, this meant that senior staff were moved to areas where they were less likely to come into contact with patients with COVID-19. This process unsettled usual hierarchies of seniority. Müller-Mahn et al. (2018), drawing from Massey's (1994) work on uneven power relations, point out that riskscapes have their own dynamic power geometries. How people fare as they are caught up in relations of power within riskscapes depends on their capacity to engage with, resist, or cope with the risks. The participants were

relatively young compared to the average age of the nursing workforce and tended to be in good health. They were therefore more likely to find themselves assigned to tasks that were considered too risky for older and more senior colleagues:

...if I was working with two older nurses that couldn't take Covid patients, it meant that there was only me and one other nurse that could. So, it was really hard, yeah, if they were either really unwell or just needed something quick ...it just took a while, but we got into good systems and found that if you have a runner outside the room, it makes it easier. I did find that a lot of the time I did get designated for suspected Covid patients just because I'm younger ... it did make the workload a lot heavier and you had to learn different skills pretty quick to be able to do things ... you were just thrown in the deep end (2)

In clinical areas it is commonplace for advanced training of various kinds to be offered after some designated period of time has elapsed and even then in a structured manner. This waiting time allows the nurse to develop sound base expertise before progressing to more advanced practice. This usual sequencing can be circumvented as urgent need arises. It was in the context of anticipated need that some nurses took opportunities that would not otherwise have been available to them. These chances early in their career were viewed as a positive aspect of the lockdown in spite of the extra and sometimes stressful work involved:

So, they fast tracked my colleague and I in a lot of our certification ... like PICCs and Ports [PICCs and Ports are two different methods of delivering drugs into the blood stream] ...when it was meant to be a 6 to 8-month thing, we did it in about three months just 'cause we didn't think anybody was going to be on the ward to be able to do them. ... it was just like a fast learning curve and quite beneficial for us. (2)

But my health was fine, so they trained me in the contingency plan just in case I need to because I could go anywhere. I spent almost a month training ... as well as doing my regular jobs. So, it was double the work for me, but I just took it as a challenge. It was a learning opportunity for me, so why not. (2)

I put my hand up to do a lot of the crisis stuff, so I ended up being completely flat out in my week at base. (1)

There were also less formal opportunities for those who were eager to learn more. One participant, for example, whose work space was largely unaffected by the pandemic, took the initiative to learn what was happening in the assessment unit where suspected COVID-19 patients were being admitted:

It was a Saturday afternoon, their nurses were incredibly welcoming when it was busy, and it was really good 'cause they received a ... query Covid from the community, just to see how they had the ward all set out, the things they thought about, just to visualise in your head how that process went. ... you don't cover a lot of infection control in training and it is such a different thing, isn't it, that everyone's probably a little bit amateur. (1)

Training and professional development take on a different complexion in times of crisis. Threats and opportunities tangle in the specific context in which people find themselves. All the participants in this study were able to continue to progress, although not necessarily in expected ways. If the crisis had lasted much longer, the situation may have been quite different as it is in many parts the world, with high levels of staff exhaustion (Giusti et al., 2020), uncertainty over training programmes (Ford, 2020; Tomietto et al., 2020) and disillusionment with the chosen profession (Mira et al., 2020). Spatial context and temporality matter in crisis risk and careerscapes and serve to mediate the relations between virus and profession.

3 | CONCLUDING COMMENTS

The virus threads through crisis risk, care and careerscapes as they muddle along together in this COVID-19 moment. The language of certainties often accompanies efforts to contain incursion and spread of new viruses in the expectation that humans have omnipotent power to ultimately control the natural world. If breaches happen then someone or something must have failed to follow protocols. As Section 1 of this paper has shown, protocols guide up to a point after which human decision-making must take over to deal with the messy world that does not always fit the defined structure envisaged in protocols, both in and outside healthcare settings. The complexity and multi-faceted nature of the carescapes nurses inhabit is vast. Many of the elements of the carescape identified in this paper are present on a regular basis for nurses but are intensified by the viral crisis riskscape. The invisibility of carework has been well-documented but bears repeating in this context as countries demand much of their healthcare staff yet often understand little of what they actually do. Careerscapes are of course not walled off from the other scapes. Having made the very significant decision to undertake MNSc degrees, participants were keen to see their careers progress apace. In the middle/muddle of COVID-19, these careers were not derailed, but could have been. Virus/risk/care/careerscapes are indeed complex, uncertain and unstable material, spatial and temporal entities.

Finally, the pandemic coincides with a global shortage of nurses (World Health Organisation, 2020b). In the interests of recruitment, and retention in particular, the findings in this study

identify some pinch points where action by those designing entry to practice support programmes for new graduates and indeed support for all nurses may usefully address concrete issues nurses must grapple with. In practical terms those designing pandemic plans may profit from considering how they communicate with staff about navigating the border between work and home as well as acknowledging the very significant emotional and physical care labour that nurses just get on and do, both in and outside the workplace to try to protect those most vulnerable. These issues are intensified during pandemics, but are essentially always present for nurses, so action on them should not be confined to pandemic times.

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CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

DATA AVAILABILITY STATEMENT

No data are publicly available from this study due to confidentiality requirements of the Committee that gave ethical approval for the project.

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