The Silent Exhales: Understanding the experiences of respiratory therapists performing terminal extubation during the COVID-19 pandemic

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Permissions/Attributes

Epigraph

"That's the thing about human life – there is no control group, no way to ever know how any of us would have turned out if any variables have been changed."

~

"Intelligence is one of the greatest human gifts. But all too often a search for knowledge drives out the search for love. I present to you a hypothesis: intelligence without the ability to give and receive affection leads to mental and moral breakdown – to neurosis, and possibly even psychosis. And I say that the mind absorbed and involved in itself as a self-centered end, to the exclusion of human relationships, can only lead to violence and pain."

~

-Daniel Keyes, *Flowers for Algernon,*

(Keyes, 1966)

Abstract

Introduction: Terminal extubation and ventilator withdrawal are complex aspects of end-of-life care that require respiratory therapists (RTs) to navigate technical, emotional, and ethical responsibilities. During the COVID-19 pandemic, increased mortality, visitation restrictions, staffing shortages, and changing clinical protocols intensified these experiences. Despite their central role in ventilator management, RTs remain underrepresented in the literature.

Purpose: This thesis explored how respiratory therapists in Manitoba describe their experiences with terminal extubation and ventilator withdrawal during the COVID-19 pandemic, and the self-reported impacts on their clinical practice, professional identity, and personal well-being.

Methods: A qualitative descriptive design was used, employing semi-structured interviews with 10 practicing respiratory therapists in Manitoba, Canada. Data were analyzed using thematic analysis to identify patterns and themes across participant narratives.

Findings: Across 9 emerging categories, 4 themes were identified from the data – *Practice in Retrospect, Shocks to the System, Quality Care & Motivation Struggles,* and *Working in the Aftermath.* These themes can be interpreted temporally along the pandemic timeline, or conceptually through key findings in shared accounts. Participants described their role in terminal extubation as both technically specialized and emotionally demanding, with their roles grounded in technical competence despite the limited involvement in decision-making. The emotional and ethical burden of ventilatory support withdrawal intensified during the pandemic, contributing to moral distress, burnout and emotional detachment. The COVID-19 pandemic fundamentally changed the experience of terminal extubation by disrupting established practices, increasing system strain, and creating lasting changes to workflows and perceptions of quality end-of-life care.

Conclusion: This thesis highlights the lasting impact of pandemic-related end-of-life care on Manitoba RTs and emphasizes the need for organizational and psychological supports to sustain compassionate care during future healthcare crises.

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Dedication

I dedicate this thesis to my younger self, whom I once judged too harshly.

She had the strength and perseverance to get us here.

I am forever grateful she chose to keep going.

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1.0. Introduction

Science fiction writer Joseph Fink once said, “all the beauty in the world was made within the oppressive limitations of time, and death, and impermanence” (Fink & Cranor, 2016). Though he was speaking through one of his sci-fi protagonists, its interpretation permeates through the genre and proposes one of life’s greatest lessons: that the beauty of existence is heightened by its fragility, making life worth living despite its inevitable end. The advancements in medical sciences have reshaped these boundaries between life and death. Modern medicine has transformed the body’s relentless fight to breathe into a problem that can be mechanically solved, extending life in ways that were once unimaginable. The development of intubation and mechanical ventilation represents one of science’s greatest achievements. By granting clinicians the ability to support life when the body can no longer do so, healthcare treatments were transformed from observing respiratory failure, to intervening in it.

Mechanical ventilation is an engineered treatment that replaces a person’s natural breathing mechanisms with a machine-driven positive pressure alternative that maintains respiratory gas exchange and hemodynamic function (Alvarado, Hidalgo, Hidalgo, & Sinclair De Frias, 2023). It is also the most globally accepted intervention to treat the acute respiratory distress syndrome (ARDS) secondary to severe coronavirus infections, as it optimizes oxygenation of vital organs and muscle preservation. While this advancement represents the culmination of decades-worth of knowledge, there comes a time in clinical intervention when all possible medical options are exhausted. It is at this time that a decision has been appropriately made to discontinue life-support, leading to a patient’s death (Alvarado, Hidalgo, Hidalgo, & Sinclair De Frias, 2023). Decisions to withdraw life-sustaining treatments have increased in frequency, resulting in approximately 60-80% of deaths in the intensive care unit (ICU) occurring after limitations are enacted on life-support interventions (Chartrand, Nguyen-Lu, Soliman, & Harder, 2026). The ability to mechanically sustain

breathing is often celebrated as a triumph of modern medicine, yet it has also introduced new clinical, ethical, and human complexities (Chartrand, Nguyen-Lu, Soliman, & Harder, 2026).

Healthcare workers may endure significant psychological distress going through these inimitable experiences (Chartrand, Nguyen-Lu, Soliman, & Harder, 2026). It can take a heavy toll on their psychological well-being, requiring mental health supports and other resources. Respiratory therapists (RTs) are healthcare professionals that are tasked with management of the mechanical ventilator in hospital settings and therefore, are intimately involved with the process of terminal extubation and cessation of mechanical ventilation. They must be able to display the empathy required in these situations, while still maintaining the responsibilities and needs of their meaningful workload. Undergoing these traumatic events is burdensome on a regular basis, but the effects of the SARS-CoV-2 (COVID-19) pandemic surely exacerbated the negative impacts on the health and well-being of a frontline RT (Chartrand, Nguyen-Lu, Soliman, & Harder, 2026). The experiences of RTs performing this process need to be studied, with a goal of identifying key factors and perceptions related to the COVID-19 pandemic. This information can help identify the services and resources needed for respiratory therapists to maintain their health and well-being, to continue involvement in their careers. Recognizing and validating the toll of the stories they hold is fundamental in acknowledging their well-being and safeguarding their continued presence in the profession.

1.1 Background and Context

In this section, I will explain the background and context that will frame the main topic of this project. I will begin by defining the procedure of terminal extubation and psychological distress and expand on several public safety changes caused by COVID-19 and its impact on respiratory therapy practice. This information will be vital in contextualizing what will be discussed in later chapters.

1.1.1. Defining Terminal Extubation

Advanced care directives are a method by which patients can direct the type of care they wish to receive when in critical conditions, but it also dictates the limits to the accepted healthcare interventions. The distinction between withholding and withdrawing life-sustaining treatment is well established in critical care literature (Choi, Rodgers, Tocher, & Kang, 2022). Withholding treatment refers to the decision not to initiate a life-sustaining intervention, whereas withdrawing treatment involves the discontinuation of an intervention that has already been given (Choi, Rodgers, Tocher, & Kang, 2022). Within these definitions, terminal extubation is understood as a form of treatment withdrawal, as it involves the removal of mechanical ventilation that is actively sustaining life (Cottereau, et al., 2016; Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022). Clinically, terminal extubation refers to the planned removal of an endotracheal tube in a patient for whom continued mechanical ventilation no longer aligns with goals of care or the patient's wishes. This typically follows decisions to transition to comfort-focused or palliative care management. This process is distinct from emergency extubation, as it is intentional, coordinated, and occurs within the context of end-of-life planning (Cottereau, et al., 2016; Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022). The process of terminal extubation is familiar to respiratory therapists and involves coordinated steps guided by interdisciplinary communication, confirmation of goals of care, preparation of the patient and family members (Cottereau, et al., 2016; Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022; Cullum, Madani, Cutler, & Reavis, 2022). Respiratory therapists may adjust ventilator settings prior to extubation (a process known as terminal weaning) or proceed directly to removal of the endotracheal tube, depending on the clinical context and patient needs. Symptom management, such as dyspnea, agitation, and discomfort, is a common possibility during the process, requiring careful clinical judgement and ongoing monitoring. For respiratory therapists, this represents a critical point of involvement in the withdrawal of life-sustaining therapy (Cottereau, et al., 2016; Orr, Efstathiou, Baernholdt, & Vanderspank-Wright,

2022; Cullum, Madani, Cutler, & Reavis, 2022). As the clinicians that are primarily responsible for ventilator management, respiratory therapists are often directly involved in both the technical execution of the extubation and the immediate events that follow (Cullum, Madani, Cutler, & Reavis, 2022). Each patient that undergoes a terminal extubation may experience various unpredictable physiological and symptomatic presentations that all require proper management by the healthcare team. This positioning places RTs at the intersection of technical expertise and end-of-life care, contributing to the complexity of their role within the withdrawal process (Cullum, Madani, Cutler, & Reavis, 2022).

Health care organizations and clinical professionals often work to ensure the decision-making process is as standardized and rooted in evidence-based practice, albeit with the ability to accommodate nuance and extenuating circumstances. Institutions often implement guidelines and care protocols to provide direction in these situations, yet conflicts can still occur with the timing and point of ventilation withdrawal. It is usually only after all other avenues of care have been trialled, considered, or deemed more harmful to the patient, that terminal extubation is considered. This decision is made with the understanding that the patient's death is anticipated shortly afterward. Prior to this process, other adjunct therapies may be discontinued as well, such as gastrointestinal tubes or vasopressor medications, with the goal of ventilation being the last therapy discontinued (Cullum, Madani, Cutler, & Reavis, 2022). Patients will often be kept on palliative therapies to maintain comfort and to allow family members and loved ones to be able to be present in these final moments. The extubation itself involves removal of the artificial airway, such as the endotracheal or tracheostomy tube, and the cessation of the mechanical ventilator, which involves turning off the machine. After this process, the patient is left to pass away without further intervention. This period varies greatly with each unique individual. Oftentimes, family members are invited to spend time with the patient before they are ready to leave their room (Cullum, Madani, Cutler, & Reavis, 2022). While this procedure requires an interprofessional team

approach, respiratory therapists are the professionals that are tasked with removing the endotracheal tube. Therefore, they are part of the final withdrawal process and are witness to the biological reactions of the body at the time of death, as well as the emotional reactions of the patient's loved ones that are present.

1.1.2. Defining Psychological Distress

Psychological distress among healthcare workers is a multifaceted phenomenon that arises from repeated exposure to emotionally and ethically challenging clinical situations. Central to this experience is moral distress, which occurs when clinicians are constrained from acting in accordance with their professional or personal values, often due to systemic, institutional, or hierarchical barriers (Litz & Kerig, 2019; Adeyemo, Tu, Falako, & Keene, 2022). Moral distress exists along a continuum shaped by both the intensity of distressing events and their frequency of occurrence. Events that are less intense but occur frequently may contribute to ongoing moral frustration, whereas highly distressing events as infrequent as they are, may result in moral injury, which is a more profound and enduring disruption to an individual's moral and psychological well-being (Litz & Kerig, 2019; Adeyemo, Tu, Falako, & Keene, 2022). This conceptualization highlights that psychological burden is not solely dependent on singular traumatic events, but rather on the cumulative interaction between the repeated exposure and emotional impact over time.

The experience of moral distress is closely linked to emotional processing and regulation, as individuals must continuously navigate complex emotional responses within highly stressful environments. Emotions function as adaptive mechanisms that guide social interaction and behavioral responses. However, persistent exposure to distressing or ethically challenging situations may disturb these processes (Litz & Kerig, 2019). Clinicians may experience a growing disconnect between expected emotional responses and their actual feelings, contributing to confusion, emotional blunting, or heightened reactivity. Emotional responses associated with moral distress often include self-conscious emotions such as shame and humiliation, as well as self-

condemning emotions such as anger, guilt, or disappointment (Litz & Kerig, 2019). These disruptions can destabilize an individual's sense of self and their perceived role within both professional and social contexts, further compounding psychological distress.

While closely related, emotional distress represents a distinct but overlapping construct. Emotional distress is characterized by heightened negative emotional states such as anxiety, sadness, or anger (Riguzzi & Gashi, 2021). These arise from situations perceived as uncontrollable or overwhelming. In healthcare environments, emotional distress may emerge independently or as a downstream effect of sustained moral distress. Frontline clinicians are particularly vulnerable due to ongoing exposure to critical illness, death, and uncertainty, often without sufficient time or support to process these experiences (Riguzzi & Gashi, 2021). The structure of healthcare work, including shift-based schedules and frequent transitions of care between providers, can further limit opportunities for emotional resolution, which allows distress to accumulate over time.

During the COVID-19 pandemic, these challenges were intensified by both systemic and societal factors. Healthcare workers faced increased workloads, resource limitations, and heightened uncertainty, while also navigating public narratives that positioned them as "heroes" (Riguzzi & Gashi, 2021). Although intended to recognize their contributions, this framing may have inadvertently discouraged acknowledgement of distress, creating tension between professional expectations and personal vulnerability. This tension reflects a broader ethical conflict, as clinicians were expected to uphold ideals of resilience and self-sacrifice while simultaneously managing legitimate concerns for their own safety and the well-being of their families (Riguzzi & Gashi, 2021).

Prolonged exposure to moral and emotional distress can contribute to broader forms of psychological strain, including burnout and compassion fatigue. Burnout is characterized by chronic emotional exhaustion, reduced personal accomplishment, and depersonalization. This often results from sustained exposure to high work demands without adequate recovery time (Miller, et al., 2021a). These events have been widely documented among healthcare workers, particularly during

the COVID-19 pandemic, where increased workloads and resource constraints exacerbated existing stressors. Burnout can lead to decreased job satisfaction, impaired clinical performance, and a diminished sense of professional identity. This ultimately culminates in healthcare workers leaving the workforce altogether (Miller, et al., 2021a)

Closely related is compassion fatigue, which refers to a reduced capacity for empathy resulting from prolonged exposure to the suffering of others (Stoewen, 2020). Individuals experiencing compassion fatigue may exhibit emotional withdrawal, irritability, and social isolation, as well as difficulty maintaining meaningful interpersonal connections. The withdrawal can further limit opportunities for peer support and emotional processing, thereby reinforcing cycles of distress. In the context of end-of-life care, where clinicians are repeatedly exposed to death and dying, compassion fatigue may significantly impact both professional functioning and personal well-being (Stoewen, 2020).

Moral distress, emotional distress, burnout, and compassion fatigue contribute to the broader construct of psychological distress, which encompasses a range of adverse mental health outcomes, including anxiety, depression, and post-traumatic stress disorder (D'Alessandro-Lowe, et al., 2023). These outcomes are especially prevalent among frontline healthcare workers who are frequently exposed to ethically complex and emotionally demanding situations. Pre-pandemic research indicates that clinicians with high levels of exposure to death and dying are at increased risk for these outcomes, highlighting the vulnerability of professions such as respiratory therapy, where involvement in life-sustaining therapy withdrawal is both frequent and central to practice (D'Alessandro-Lowe, et al., 2023).

Psychological distress should be understood as a cumulative and dynamic process rather than a static condition. The interaction between repeated exposure to distressing events, limitations in emotional processing, and systemic constraints creates an environment in which distress can intensify over time if left unaddressed. This framework is essential for understanding the

experiences of respiratory therapists, particularly in the context of the COVID-19 pandemic, where existing stressors were amplified and new challenges emerged. As such, examining psychological distress through the interconnected lenses of moral, emotional, and professional strain provides a more comprehensive understanding of how clinicians experience and respond to sustained exposure to high-intensity care environments.

1.1.3. The Respiratory Therapy Profession

Respiratory therapists repeatedly carry out terminal extubations in an act that is clinically necessary, ethically complex, and psychologically costly (Kaur, Geistkemper, Mitra, & Becker, 2023). Respiratory therapists (RTs) are regulated and credentialed healthcare professionals who specialize in cardiovascular and respiratory medicine, providing therapeutic interventions and critical practices to all types of patients (Kaur, Geistkemper, Mitra, & Becker, 2023). In Canada, RTs must successfully pass a licensing exam after completing an entry-to-practice program that meets their National Competency Profile (Canadian Society of Respiratory Therapists, 2012). While there is no degree requirement, most programs grant an advanced diploma or dual-credential option upon graduation. Like their American counterparts, Canadian RT programs have made a recent push to standardizing pre-professional programs into bachelor's degrees, to provide opportunities for career advancement and employment portability (Canadian Society of Respiratory Therapists, 2012).

Respiratory therapists provide clinical care for a wide range of care fields and in both acute and chronic conditions, by utilizing their expertise in cardio-respiratory medicine to provide interventions and therapies to rehabilitate a patient's cardiovascular and neurologic status (Brown, et al., 2024). RTs are well trained in rapid response, emergency recovery, and disaster-like situations, as a large component of their basic training centers around operating in highly stressful situations and maintaining calm amongst the chaos. Being able to make decisions and provide solutions is key in becoming an effective and skilled therapist, which is vital in navigating the

demands of the healthcare system. As the COVID-19 pandemic created a need for trained workers to be able to adapt their practice, respiratory therapists were well equipped to manage the additional strain that came with the increased patient load (Brown, et al., 2024). Respiratory therapists are essential in the procedure of terminal extubation as their skill expertise is based in mechanical ventilation management, establishment of artificial airways, and providing patient and family member education (Cullum, Madani, Cutler, & Reavis, 2022). They are present during the intubation procedure, often assisting the directing physician, and collaborating with nurses and other clinicians in providing the arduous care of patients on life-support. Throughout their time with patients, RTs also ensure that a comfortable and safe environment is provided for the patient and family during the entirety of their hospital admission. They participate in clinical rounds and family meetings when they are able, and once a decision has been made to terminally extubate a patient, this task is often left to the respiratory therapist. They become responsible for removing the artificial airway and disconnecting the ventilator, while simultaneously managing the experience of the patient's family (Cullum, Madani, Cutler, & Reavis, 2022).

Though exposure to death and dying may be considered a normal expectation of the profession, not all deaths are experienced equally, unexpected or unanticipated losses carry a particularly traumatic weight that routine end-of-life care does not always produce (Allender, et al., 2023). The repeated witnessing of such events can give rise to vicarious trauma, where a healthcare worker internalizes the suffering of their patients and families to the point that it begins to affect their own psychological wellbeing. This is closely related to the concept of the "second victim experience," which occurs when an individual experiences distress following an adverse or unanticipated event, such as an unpredicted death or an unexpected clinical outcome. In this framework, the central patient is considered the first victim, while the healthcare worker, burdened by their own emotional and psychological response to the event becomes the second (Allender, et al., 2023).

In the context of the COVID-19 pandemic, where the typical pre-planning and debriefing of sensitive events such as a patient's death may at times not be feasible before RTs and other HCWs are forced to attend to other patients (Allender, et al., 2023). This left RTs in an especially dangerous state of vulnerability regarding psychologically damaging distress without proper support. This would further contribute to the attrition of professionals for the healthcare workforce (Allender, et al., 2023). A sample population of Canadian respiratory therapists were surveyed in 2023 to gauge the impact of the COVID-19 pandemic on workers' psychological well-being, coping outcomes, and career influences (D'Alessandro-Lowe, et al., 2023). In a sample of over 200 RTs, 1 in 4 cited moral distress as a primary reason for leaving the respiratory profession. Additionally, of the subset that had considered leaving, over half were likely to have tested positive for post-traumatic stress disorder. Respondents who reported moral distress did so amongst three field levels: patient, team, and system. While this does highlight that RTs experienced moral distress, the survey's limitations prohibit us from knowing explicitly what happened, thereby providing a rationale for the need of qualitative studies focused on respiratory therapist experiences that come directly from the source (D'Alessandro-Lowe, et al., 2023). Nationally, RTs experienced significant impacts on their clinical practice as they navigated the pandemic's transmission waves (Duong, et al., 2023; Anaraki, Mukhopadhyay, Karaivanov, Wilson, & Asghari, 2022). Across provinces, Manitoba, Ontario, and Alberta reported especially high rates of infection and hospitalizations as they implemented various policy measures to try and taper the number of COVID cases occurring. Like other provinces, Manitoba's larger populations gather in urban centers, where higher case densities drove the demand for acute care services in all areas. Rural and remote healthcare settings faced unique challenges regarding staffing and barriers to accessing care, which highlighted the disparities in system capacity and workforce resilience. Rural healthcare workers in Canada reported stressors related to provider shortages, increased workload pressures, and the ongoing changes to their clinical practice, particularly in areas that had greater geographic isolation in comparison to their

urban counterparts. The differences in resource accessibility and workforce redeployment caused a complex difference in provincial response between urban and rural respiratory therapists, which caused an amplified challenge of maintaining routine while responding to care (Duong, et al., 2023; Anaraki, Mukhopadhyay, Karaivanov, Wilson, & Asghari, 2022).

1.1.4. The COVID-19 Pandemic

The SARS-CoV-2 coronavirus (COVID-19) pandemic was a global crisis that resulted in unexpected and unpredictable healthcare challenges and economic problems (Riguzzi & Gashi, 2021). The level of uncertainty that occurred regarding prognosis, personal protection, isolation precautions, and effective treatments led to negative impacts on the psychological health of the entire population. Feelings of stress, shock, anxiety, fear, and grief were seemingly insurmountable at times. The lasting effects on the economy are still being experienced, despite the apparent return to previous public and private societal norms. The full extent of its influence on health, economy, and overall loss may not yet be fully understood for years to come (Riguzzi & Gashi, 2021). While the economic and social impacts of the pandemic cannot be understated, the focus of this thesis will center on facets of the healthcare system such as disaster responses and worker experiences.

The unforeseen rise of coronavirus transmission at the beginning of 2020 caused a worldwide state of emergency that involved workforce adaptations and supply chain management issues that were worsened by breakdown of general social function (Coates, Mihailescu, & Bourgeault, 2024). Frequent changes in public safety measures and a lack of previous history with health disasters of this magnitude intensified the public's mistrust of national governments and regional health authorities. Increased tensions between healthcare workers and their patient populations rose as health ministries struggled to accommodate the increasing patient load and shrinking resources. Even as the initial acute phase subsided, frustrations mounted with every additional transmission wave, causing a potentially irreparable strain on the healthcare system. Many strategies that were utilized to expand care services within protection protocols attempted to

decrease patient volume, but not without increasing the workload it placed on healthcare services and workers. Virtual and telehealth care were quickly established and disseminated, and role expansion occurred within nearly every clinical occupation. This led to the redeployment of workers to high need areas and an invitation for retired professionals to rejoin the workforce (Coates, Mihailescu, & Bourgeault, 2024). The pandemic caused radical changes to healthcare practices in a desperate attempt to lessen the fatality rate of the disease (Milo, Gomez, Suarez, Calero, & Connelly, 2023). Through each transmission wave, HCWs continued their jobs, taking on familial roles for patients during times when visitors were prevented from entering hospital and other care sites. Notably, this included being present for a patient's last moments to provide dignity and compassion and acting as a link to family. Many workers were pushed beyond their comfort zones, and almost all fields experienced staffing shortages and extended hours. Particularly challenging were the frequent changes in public health standards and site requirements regarding isolation precautions and treatment options. Following the pandemic, many healthcare workers exited the field after having experienced ill effects on their own health or symptoms of post-traumatic stress, worsening the staffing crisis and the perception of work-life balance (Milo, Gomez, Suarez, Calero, & Connelly, 2023).

During the early and mid-stages of the pandemic, the impact on the healthcare system became apparent as every care level began to show signs of strain (Duong, et al., 2023; Turner, Smith, & Jones, 2024). Up to the delta wave variant, significant disruptions in clinical operations, supply chain management, and staffing levels caused rapid operational changes that impacted the respiratory therapy practice and the ability for healthcare workers to effectively do their jobs (Duong, et al., 2023; Turner, Smith, & Jones, 2024). Healthcare delivery in Manitoba was significantly disrupted, resulting in stressed hospital capacity surges and high critical care demands, creating resource shortages that compromised intensive care unit function and service delivery (Canadian Institute for Health Information, 2022). National analyses of hospital data show that each

transmission wave resulted in higher volumes of respiratory admissions, decreased availability of hospital beds, and strict redistribution of mechanical ventilators, which Manitoba was already experiencing difficulties managing (Canadian Institute for Health Information, 2022). Between early 2020 and 2022, Manitoba experienced sustained pressure on public healthcare systems across the province as each transmission wave occurred (Duong, et al., 2023). A population-based seroprevalence study found that 60% of Manitobans developed SARS-CoV-2 antibodies due to infection after the 4th pandemic wave. This reflects widespread transmission despite the public health measures enacted to control it, and matched national patterns of surges caused by coronavirus variants (Duong, et al., 2023). While all Canadian provinces experienced significant morbidity and mortality rates, Manitoba, Ontario, and Alberta recorded especially high levels of infection and hospitalizations (Canadian Institute for Health Information, 2022; Gibney, et al., 2022). This occurred predominantly during peak waves, which highlighted the interprovincial variability of epidemiological trajectories and healthcare policy measures. This also elevated the need for trained critical care professionals and expected ICU capacity requirements limits, which required creative solutions regarding available staff and space. Nationally, pediatric ICUs had to accommodate adult patients, and non-ICU spaces were repurposed into COVID-positive care areas, staffed with redeployed healthcare workers from other departments and non-critical facilities to meet demand. Despite contingency plans, there was a 28% increased mortality rate for ventilated ICU patients and prolonged hospital stays that further exacerbated resource utilization. Manitoba hospitals found that hospital mobilization and staff restructuring helped alleviate workloads, but that systemic constraints on workers and infrastructure tainted the public's perception of the provincial response to COVID-19 (Canadian Institute for Health Information, 2022; Gibney, et al., 2022).

As cardio-respiratory experts, RTs were extensively involved in the frontline services during the COVID-19 pandemic. Their need was greatest in care areas that accumulated high

concentrations of COVID-positive patients, such as intensive care units, emergency rooms, long-term care homes, and medical wards (D'Alessandro-Lowe, et al., 2023). They provided therapeutic and rehabilitation services, as well as acute, critical interventions at all patient population levels. Additionally, attending to patients' emotional and mental health needs as they navigated recovery became extremely difficult during uncertain times. RTs experienced periods working with limited equipment and resources became the norm. Despite difficulties securing personal protective equipment, they were still expected to facilitate care within the infection control and precaution and isolation requirements. This complicated end-of-life care, an already sensitive and delicate process, as many team and family discussions regarding planning had to be done virtually. Individuals resorted to saying goodbye to their loved ones via video and telephone calls (D'Alessandro-Lowe, et al., 2023).

In hospitals, RTs often remained at the bedside when hope receded and mechanical ventilation was withdrawn. The COVID-19 pandemic fundamentally reshaped the clinical role of respiratory therapists as they worked tirelessly in the center of the rapidly evolving environment (Allender, et al., 2023). As unprecedented surges in respiratory failure occurred, RTs assumed expanded responsibilities that required technical expertise and emotional resilience. The high frequency of terminal extubation events highlighted the pandemic's human cost and psychological burden (Allender, et al., 2023). Recognizing these experiences is essential to understanding the full impact of the pandemic on the respiratory therapy profession and the lasting effects on those who provided care at the bedside.

1.2. Study Details

Among those directly involved in end-of-life care management, respiratory therapists work in roles that involve technical expertise, emotional intelligence, and compassion. Unique professional and personal implications stem from heightened mortality rates, public restrictions, and constantly changing protocols. In this context, a research question emerges: How do respiratory

therapists perceived the process of terminal extubation during the COVID-19 pandemic, and what impact have these experiences had? Answering this question provides valuable insight into the emotional and moral dimensions of the respiratory therapy practice during a global health crisis.

1.2.1. Study Purpose

The purpose of this master's thesis is to understand how do respiratory therapists perceive the process of terminal extubation and ventilation withdrawal during the COVID-19 pandemic. The focus of this study will be on respiratory therapists practicing in Manitoba, Canada and the ways they describe experiencing these events and the self-reported impacts it had on their clinical practice and identity. The research question of my thesis is: how do respiratory therapists in Manitoba describe their experiences with terminal extubation and ventilation withdrawal during the COVID-19 pandemic, and what are the self-reported impacts on their professional and personal lives?

1.2.2. Study Rationale

Canada's decentralized healthcare system is universal and publicly funded, with provincial governments being separately responsible for their own healthcare services (St. Ledger, et al., 2013). Differences may exist between regions, but the provision of end-of-life (EOL) care is an experience common amongst all healthcare professionals in some capacity. Severe illness and decline may occur suddenly and without warning, and sometimes, advanced care plans regarding dying wishes and care directives are not arranged by the patient beforehand. This puts healthcare staff and the patient's family in difficult situations where they must make decisions about medical interventions, prolonged care, or the withdrawal of therapy. While attempting to maintain patient-centered care, these situations might conflict with individual ethical and moral beliefs, resulting in tensions between personal values, organizational responsibilities, and societal expectations (St. Ledger, et al., 2013).

Both moral and emotional distress among frontline healthcare workers can contribute to psychological distress, particularly as it relates to the repeated exposure to death and dying (D'Alessandro-Lowe, et al., 2023). This exposure has been linked to an increased risk of depression and anxiety, with academic literature pre-dating the COVID-19 pandemic showcasing the high-risk groups that exist among workers that provide end-of-life care. The central role of respiratory therapists in the provision of this care, represents a population that is both incredibly vulnerable but significantly under investigated (D'Alessandro-Lowe, et al., 2023). During the COVID-19 pandemic, respiratory therapists across Canada experienced disruptions to their clinical practice (Duong, et al., 2023; Anaraki, Mukhopadhyay, Karaivanov, Wilson, & Asghari, 2022). The high rates of infection and hospitalization in Manitoba intensified the demands on acute care facilities, while also compounding the challenges of staffing shortages, resource limitations, and geographic isolation of rural and remote settings. These disparities were noticeable in the differences between system capacities in these diverse locations (Duong, et al., 2023; Anaraki, Mukhopadhyay, Karaivanov, Wilson, & Asghari, 2022). In hospital environments, the pandemic reshaped the RTs' role in terminal extubation during end-of-life care (Allender, et al., 2023). The increased frequency of terminal extubation events underscored the profound psychological burden associated with the role of the respiratory therapist. Recognizing and examining these experiences is essential to understanding the full impact of the pandemic on the RT profession, as well as the lasting effects on those who provided this care at the bedside (Allender, et al., 2023). A study that captures these unique stories can help to better understand how these professionals navigate the duties and challenges of their careers, and the ways that these changed before and after the COVID-19 pandemic.

This master's thesis is relevant because a) it seeks to analyze narrative experiences of respiratory therapists performing terminal extubation, b) it aims to research an underrepresented profession during a national pandemic, c) it will describe how respiratory therapists perceived

terminal extubation during the pandemic, and d) it will reveal how healthcare organizations can contribute to the psychological health and well-being of their staff. The findings and discussion in this thesis will highlight the change in experience following the COVID-19 pandemic and the institutional changes that can be recommended to improve healthcare recognition, recruitment, and retention.

1.2.3. Study Objectives

My thesis objectives are as follows:

1. Describe how Manitoba respiratory therapists perceive their role and responsibilities during terminal extubation,
2. Describe the impact of enacting terminal extubation and ventilatory withdrawal on Manitoban respiratory therapists' practice,
3. Describe how COVID-19 changed the experiences of terminal extubation and ventilator withdrawal for Manitoba respiratory therapists.

Discovering additional information related to the overall study question and areas of interest will guide us in revealing what respiratory therapists report in regarding their provision of end-of-life care and related emotional well-being.

1.3. Thesis Structure

In chapter 2 of this thesis, I will explore the concepts of healthcare worker concerns, experiences of distress, the discussions of the COVID-19 pandemic in the literature, and the gap in research evidence that justifies the importance of my study question. In chapter 3, I will discuss my thesis methods that I employed to address my study objectives. In chapter 4, I will discuss my data organization and analysis which utilized a modified version of Braun and Clarke's (2013) stages of thematic analysis that incorporated the Framework Method described by Gale et al (2013). In chapter 5, I will discuss the results of my study, where I utilized NVivo (v.15.3.0) to analyze, categorize, and identify themes of practice introspection, shocks to the healthcare system, quality

care and motivation struggles, and working in the aftermath. In chapter 6, I will relate my findings to the literature review and address what themes apply to each of my research objectives. In chapter 7, I will conclude the thesis with the strengths and limitations of my study, a summary of my project, and a final note on the next steps in the overarching project and future of respiratory therapy research.

2.0. Literature Review

This chapter will discuss the literature review that was conducted prior to this research project to inform the methodological process of the study. The goal of a literature review is to conduct an appraisal of the existing literature relevant to the study's focus and qualitative approach (Creswell & Poth, 2018). By critically examining prior studies, the literature review helps situate the present research within the broader scholarly conversation while ensuring that the study is theoretically informed and methodologically rigorous (Braun & Clarke, 2021).

2.1 Purpose of Literature Review

The purpose of this literature review was to explore what previous evidence exists regarding the psychological distress experienced by respiratory therapists that provide end-of-life care related to withdrawing life-sustaining therapies. Respiratory therapy as a profession is still in its infancy when compared to the history of other healthcare professions, so a main concern was the lack of literature that would pose RTs as their central focus. Therefore, this search was broadened to include terms that generalized the titles of healthcare workers. It also incorporated the term "frontline worker" which had an increased rate of use during the COVID-19 pandemic. Additionally, as COVID-19 itself was a relatively new event, the initial literature search conducted in 2023 had limited publications on this topic. However, as the focus of my research study was to explore the ways that the pandemic had a direct impact on individual experiences, a separate research term was incorporated into the search to identify articles that directly discussed COVID-19. During the updated literature search conducted in March 2026, more publications directly related to the

COVID-19 pandemic were collected and included. The literature review includes a description of healthcare workers' main concerns, a discussion on the experiences of distress, and the identified gaps in current research literature.

2.2 Method of Literature Review

The literature review discussed in this chapter was conducted twice between December 2023 and March 2024 using the PubMed MEDLINE and CINAHL databases. The search was repeated in March 2026 to assess for newly published literature relevant to the initial search, therefore a year limiter was also added for publications created after March 2024. Figure 2.2.(a) *Keyword concept map to direct literature search* depicts the search terms applied, as well as the concepts and keywords used to generate results. This resulted in the following search string: ("Respiratory therapist") OR ("Healthcare worker*") OR ("Clinician*") OR ("Frontline worker*") AND ("End-of-life care") OR ("death care") OR ("Life-support") OR ("Life-sustaining") OR ("Withholding") OR ("Withdrawing") OR ("Terminal extubation") OR ("Terminal Care") OR ("Distress") AND ("COVID-19") OR ("COVID-19 pandemic") OR ("Coronavirus") OR (Coronavirus pandemic). The search results were also filtered with publication year, language, species, and article type limiters to further narrow the scope of the review. Additionally, the reference lists of final review articles were also searched for other relevant publications.

Figure 2.2.(a) Keyword concept map to direct literature search.

Concept 1	*Concept 2*	*Concept 3*
Respiratory therapist OR Healthcare worker* OR Clinician* OR Frontline worker*	End-of-life care OR Life-support OR life-sustaining OR Withdraw* OR Terminal extubation OR Terminal care OR Distress	COVID-19 OR COVID-19 pandemic OR coronavirus OR coronavirus pandemic
⇔AND⇔	⇔AND⇔	
Filters:	Publication Year: >2016 (Updated search – publication year: >2024), Language: English Exclude: literature reviews, scoping reviews, systematic reviews, non-research study articles.	

The full data table detailing the articles assessed for this literature review and key information can be found in *Appendix A: Literature Review Summary*. Figure 2.2.(b) depicts the demographic details of the final review articles. A total of 41 articles were reviewed, with the

Figure 2.2.(b) Literature Review Article Demographics	
Total Studies	**n=41**
Study Country	
United States	17
Canada	3
France	2
Spain	2
China	2
South Korea	2
UK	1
Norway	1
Germany	1
Poland	1
Switzerland	1
Sweden	1
Northern Ireland	1
Italy	1
Singapore	1
Vietnam	1
Iran	1
South Africa	1
Chile	1
Study Type	
Qualitative	18
Quantitative	20
Mixed	2
Study Population*	
Physicians	25
Nurses	32
Nurse Practitioners	5
Nurse Assistants/Aides	3
Respiratory Therapists	13
Physician's Assistants	5
Health care aides	2
Health care workers (broadly)	2
Other Allied Health**	8
Miscellaneous†	8
Other ‡	3
Patient/Family	2
COVID-19 Focus	
Yes	24
No	17

*Study population categories are not mutually exclusive; some studies include more than one profession, so totals will exceed n-value of included articles

**Professions under this designation include PTs, OTs, social workers, and dietitians

†Professions under this designation were unique to the article sourced from and include public health officers, geriatric carers, ambulance workers, paramedics, health technicians, and medical technical assistants

‡Other populations indicate that the article has directly stated "other" to reflect non-specific professions

majority of them from the United States (n=17) and Canada (n=3), and countries such as France (n=2), Spain (n=2), China (n=2), and South Korea (n=2) as the most frequent seen. The remaining articles were single articles from countries in Europe (n=8) such as the United Kingdom, Norway, Germany, Poland, Switzerland, Sweden, Northern Ireland, and Italy, as well as Asia (n=3) such as, Singapore, Vietnam, and Iran. Single studies from Africa and South America were also included (n=2), stemming from South Africa and Chile, respectively. Approximately half the studies (n=20) had quantitative designs with two (n=2) having a mixed methods design, and the remaining (n=19) having qualitative designs. Populations that were studied in the articles varied and occurred in many combinations. When arranged according to occupation, the results showed that articles covered nurses, physicians, and respiratory therapists as the top 3 professions studied. Other professions included more nursing-related fields such as nurse practitioners, nurse assistants, and nurse aid's, as well as physician's assistants,

healthcare aides, and other allied health professions (physical therapists, occupational therapists, social workers, dieticians). Studies that included various other healthcare professions not mentioned in any other articles were combined under the "miscellaneous" category and included public health officers, geriatric carers, ambulance workers, paramedics, health technicians, and medical technical assistants (Riguzzi & Gashi, 2021). Three articles directly stated "other professions" as part of their participant population but did not provide any further explanation and therefore were combined under its own category. The COVID-19 pandemic was a key feature in the differences between the initial and final review articles. Studies that took place post-pandemic had a purposeful objective related to investigating the pandemic's effects, and so this was considered when compiling details into the data table (Riguzzi & Gashi, 2021). More than half of the articles (n=24) involved studying some aspect of the COVID-19 pandemic on their recruited participants.

2.3 Key Findings

To organize this discussion, the literature review is examined across two central topics that emerged as particularly relevant to the aims of this study: healthcare worker concerns and experiences of distress. Following a critical synthesis of the existing evidence within these areas, the chapter will identify key gaps in the current body of knowledge and situate the present study within the broader scholarly context. By synthesizing these findings, this section of the chapter provides a foundation for understanding how the pandemic affected the healthcare system and identifying gaps in areas that require further attention and intervention.

2.3.1. Healthcare Workers' Concerns

Among healthcare workers, there is a universal consensus that honoring a patient's wishes represents the most critical aspect of end-of-life care, irrespective of the terminal nature of their condition (Ong, Ting, & Chow, 2017). However, challenges arise with the logistics and human nature involved in providing care in difficult situations, notable among them being terminal care. Factors that contribute to the difficulty is the unclear prognosis of disease, and the non-linear trajectories of

patients undergoing treatments. Concerns regarding increasing patient suffering and decreasing the quality of life, despite prolonging it, was a commonly reported experience among healthcare workers from all professions (Ong, Ting, & Chow, 2017). Recent literature continues to reinforce these concerns, with healthcare workers reporting heightened psychological distress during and after the COVID-19 pandemic (Shi, et al., 2025; Nguyen, et al., 2025; Zhang, et al., 2024). Research on end-of-life care during the pandemic shows that healthcare disruptions left providers struggling to deliver meaningful, high-quality care. This, in turn, deepened the ethical tensions and emotional exhaustion they experienced. (Franzosa et al., 2025.)

With the responsibilities that their positions held, the most daunting involved the sensitive nature of the discussion that took place between the providers, patient and patient's family (De Boer, Reimer-Kirkman, & Sawatzky, 2022; Kisorio & Langley, 2016). Difficulties arose when providers felt the need to defend their patients' wishes to their families or other team members, support them when needed, and humanize the interactions between them (De Boer, Reimer-Kirkman, & Sawatzky, 2022; Kisorio & Langley, 2016). Laurent et al. (2017) identified a sense of isolation among physicians stemming from their role as the primary initiators of these difficult conversations. These physicians reported that the planning that involved ventilation withdrawal and cessation of other therapies were a uniquely difficult experience. Nurses perceived physicians as holding greater authority, which led them to defer difficult conversations upward and created a sense of pressure to comply with that hierarchy. The resulting strain on interprofessional relationships was identified as a significant concern among healthcare workers (Laurent, Bonnet, Capellier, Aslanian, & Herbert, 2017). Contemporary research also shows that workplace stressors, burnout and psychological distress among HCWs can worsen communication challenges (Shi, et al., 2025; Soto-Camara, et al., 2024; Sherman & Petros, 2024). This was seen particularly in high-pressure environments that mimicked the pandemic conditions. Furthermore, institutional distrust and emotional distress was shown to negatively influence communication dynamics between

healthcare providers and the patients or family members. This would add another layer of complexity and difficulty to the already sensitive nature of end-of-life care discussions and related decision-making (Shi, et al., 2025; Soto-Camara, et al., 2024; Sherman & Petros, 2024).

Barriers to the decision-making process could be attributed to the cultural differences existing between professionals, the lack of interprofessional clinical practice, or a lack of effective team communication (Palma, et al., 2022). Influences from power dynamics such as a lack of involvement with care planning, and an absence of opportunities to voice professional opinions were also listed as factors that made the decision difficult from a collaborative standpoint. Furthermore, studies that included respiratory therapists in their studies found a commonality in feeling inadequate in the level of training they received. However, these sentiments were also found in other studies with nurses and physicians. Suggestions were to modify training to include tools for navigating professional relationships, such as role clarification, methods to enforce strong communication, and alternative ways to provide patient and family education (Palma, et al., 2022). More recent findings suggest that insufficient training and lack of structured support systems can also contribute to increase stress among healthcare workers (Evans, et al., 2024; Nguyen, et al., 2025). The reduced confidence in clinical practice further proves the need for targeted interventions that not only promotes psychological resilience but also incorporates the rehabilitation of effective communication strategies for frontline workers that operate within interdisciplinary care teams (Evans, et al., 2024; Nguyen, et al., 2025).

Healthcare workers were particularly concerned with improving their experiences centered around ensuring professional fulfillment (Roberts, et al., 2022; Spirczak, Kaur, & Vines, 2022). Professional fulfillment would utilize specialized skills in each scope of practice, ensuring a sense of appreciation through either team or management acknowledgement, providing a sense of community in the work environment, providing opportunities for additional education and giving adequate financial compensation. Additionally, workers were concerned that methods for

promoting positive professional experiences didn't implement consistent communication, failed to unify the team, and excluded opinions of other professionals in care decisions (Roberts, et al., 2022; Spirczak, Kaur, & Vines, 2022). Emerging intervention-based studies have begun to address these concerns, which demonstrates the need for structured well-being programs that include mindfulness-based and psychological support interventions that are a part of organizational-level changes (Bagereka, et al., 2025; Meredith, et al., 2024; Rizzi, et al., 2025). This can significantly improve job satisfaction and well-being of healthcare workers, which can lead to overall stress reduction and improved worker retention. Additionally, ongoing trials have examined ways to ensure that burnout reduction strategies take a multi-faceted approach that both encourage healthy personal coping mechanisms and improve systemic workplace factors (Bagereka, et al., 2025; Meredith, et al., 2024; Rizzi, et al., 2025).

Personal experiences of healthcare workers providing terminal care revolved around the emotional involvement and psychological effects of the situation, which included increasing feelings of anxiety, depression, and fear of death during the COVID-19 pandemic (Maduke, Dorroh, Bhat, Krvavac, & Regunath, 2021; Cullum, Madani, Cutler, & Reavis, 2022). The literature suggests that healthcare workers' biggest emotional difficulties stem from the actual physical act of removing medical devices and therapies. Another significant factor is the deep ties formed with patients and family members during their time in hospital. Healthcare workers often feel there is no true way to cope with the emotional baggage of the work, and to expect it as a normal part of the job. This is especially challenging in situations where the other patients within their workload also demand immediate attention, and workers are unable to take the time to debrief and process their emotions before returning to their tasks (Maduke, Dorroh, Bhat, Krvavac, & Regunath, 2021; Cullum, Madani, Cutler, & Reavis, 2022). The literature review featured articles that utilized longitudinal and cross-sectional studies that demonstrated the immediate and long-term impacts of psychological distress, which was particularly seen in healthcare workers that were given additional caregiving

responsibilities (Wintermann, et al., 2025; Arregui-Gallego, et al., 2025; Kanstrup, et al., 2024). Interventions aimed at addressing trauma or managing intrusive memories was also discussed in some of the articles. This pathway would easily provide effective support methods to healthcare workers. Rather than addressing PTSD directly, which often requires symptoms to worsen to the point of PTSD diagnosis, trauma-related interventions could best connect with healthcare workers that may be reluctant to identify with an explicit PTSD diagnosis. Current interventions being trialed have shown a potential benefit for reducing the mental health burden among frontline staff (Wintermann, et al., 2025; Arregui-Gallego, et al., 2025; Kanstrup, et al., 2024).

2.3.2. Experiences of Distress

Working in healthcare is no doubt challenging and difficult, but the psychological burden placed on workers goes on to affect their functional capacity and executive function (Cottereau, et al., 2016; Tratchenberg, et al., 2022). This transcends beyond the boundaries of their job and can prevent them from being able to life a healthy life outside their workplace. As established, psychological distress is used here as an umbrella term capturing the emotional and moral dimensions of distress documented in the literature. Sustained emotional exposure, compassion fatigue, and elevated stress levels threaten healthcare workers' capacity to continue in their roles. Without adequate acknowledgment and support, these factors create conditions in which unhealthy personal habits and maladaptive coping strategies tend to emerge (Cottereau, et al., 2016; Tratchenberg, et al., 2022). More recent studies further support these findings, demonstrating the persistent increase of anxiety, depression, and psychological distress that began during, but continued after, the COVID-19 pandemic (Nguyen, et al., 2025; Shi, et al., 2025; Wintermann, et al., 2025). While long-term effects are still being studied to present day, external responsibilities, such as additional caregiving duties, given to frontline workers were shown to worsen mental health outcomes. Many studies identified key predictors of long-term psychological distress, which included workload intensity, inadequate institutional support, and prolonged exposure to critically

ill patients. This suggests that the effects of the pandemic extend well beyond the notable and well-known transmission waves. The review also emphasized the relationship between workplace conditions and psychological outcomes, identifying burnout and stress being closely linked to organizational factors such as staffing levels and workload demands. Additionally, external responsibilities that were placed on healthcare workers due to staffing shortages were an additional source of professional and personal stressors, which worsened mental health outcomes (Nguyen, et al., 2025; Shi, et al., 2025; Wintermann, et al., 2025).

The current literature described how the medical professionals in their study populations reported a preference for terminal care that decreases the medicalization of death, avoids delays in care, and prevents instances of false hope. This would enable staff to restore patients to a more appropriate appearance in preparation for family member to spend their last moments together (Adeyemo, Tu, Falako, & Keene, 2022). However, the act of withdrawing of ceasing life-sustaining therapies is difficult to witness, and many healthcare workers must continue to complete the rest of their workloads after these events. Sources of stress were also due to the high number of witnessed deaths due to the pandemic, the changing work environments, increasing expectations, and concern for personal safety (Adeyemo, Tu, Falako, & Keene, 2022). Providing support during these times involve a considerable display of compassion, but to demand such a consistently high level from workers is not sustainable, and many fall into stages of compassion fatigue (Spirczak, Kaur, & Vines, 2022). Contemporary research examining end-of-life care during COVID-19 also showed how disruptions to care processes increased the emotional strain on healthcare providers (Franzosa, et al., 2024). Moral uncertainty in clinical decision-making was further complicated by institutional changes such as visitation restrictions, resource limitations, and altered clinical protocols caused controversies in providing optimal conditions for family members to be able to spend time with their loved ones (Franzosa, et al., 2024). Several demographic factors were also found to exacerbate the possibility of compassion fatigue in respiratory therapists (Spirczak, Kaur, & Vines, 2022). For

instance, RTs that were either young, were I their early career stages, or lacked work experience, were at an increased risk of experiencing compassion fatigue. Additional factors included whether RTs held positions as staff therapists, worked in critical care fields, or had low team collaboration in their workplaces (Spirczak, Kaur, & Vines, 2022).

Moral distress was a significant point of discussion in the literature and was extensively analyzed in the study populations (D'Alessandro-Lowe, et al., 2023). Moral distress was highly associated with experiences of terminal extubation and was generally agreed upon to be a decision considered only as a last resort. As previously discussed, when respiratory therapists were surveyed, they had described lasting trauma that was so significant it caused them to consider leaving their profession. When assessed, many of them tested positive for symptoms correlating with post-traumatic stress disorder, which severely impacted their connection and passion for their profession (D'Alessandro-Lowe, et al., 2023). Being unable to separate their professional and personal feelings prevents the resolution of any tensions that arise from providing care, which only further compromises the cohesiveness required in team settings. This harms the trust required between professionals to operate with respect and dignity (McAndrew & Leske, 2015; Riguzzi & Gashi, 2021). The literature reviewed indicates that moral distress was especially high during the years of the COVID-19 pandemic. Several reasons were identified across the literature including personal infection fears, risk of infecting family members, adhering to extensive transmission prevention rituals, and the inadequate supply of medical equipment. Additionally, a general sense of unpreparedness was common among all professions, heightened with the increasing challenges of coordinating the logistics needed to continue clinical practices, and the lack of prepare done by government and management organizations (McAndrew & Leske, 2015; Riguzzi & Gashi, 2021). Sherman & Petros (2024) surmised that institutional distrust and dissatisfaction with organizational responses during the pandemic contributed significantly to emotional distress and

moral conflict among healthcare workers. Participants in their study reported feelings of abandonment, disbelief, and reduced confidence in leadership (Sherman & Petros, 2024).

Moral distress as an extension of emotional distress was another significant topic of discussion (Tratchenberg, et al., 2022). This stemmed from being isolated from family, feeling alienated due to working in a healthcare profession, being unable to escape stress, and general worries about life outside of work. Feelings of isolation were worsened with the fear of contracting a coronavirus infection from a family member, or alternatively, passing transmission along to others, especially amongst children and older adults (Tratchenberg, et al., 2022). Riedel et al, (2022) reviewed publications that involved the assessment of moral distress during the pandemic and identified origins of moral distress that correlate with the findings of this review. Patient care, interpersonal relationships, and healthcare organizations were the common origins of moral stressors for workers (Riedel, Kreh, Kulcar, Lieber, & Juen, 2022). Literature that discussed moral distress only contextualized it in terms of professional customs and practices separately from personal beliefs. However, it would be remiss to exclude this from understanding the full nature of the pandemic's effect. Untreated or unresolved moral distress can accrue with each additional experience until the individual is unable to maintain healthy psychological and social functioning. This eventually manifests in moral injury, where a total disconnection of self, authority, and occupation occurs, culminating in debilitating issues with guilt and helplessness. This further impacts their ability to seek out support and maintain confidence in their work, concluding with the decision to leave their profession indefinitely (Riedel, Kreh, Kulcar, Lieber, & Juen, 2022). Longitudinal and cohort studies further support these findings, which identify that post-traumatic stress symptoms and prolonged psychological burdens become common outcomes stemming from repeated exposure to pandemic-related stressors (Arregui-Gallego, et al., 2025). For instance, variability on post-traumatic stress related to the COVID-19 pandemic was dependent on the level of workplace support, personal coping mechanisms, and prior mental health status of the individual

healthcare worker. Due to the role of both individual and systemic variables, it suggests that distress is not a uniform experience, but rather a dynamic one that is as unique as the individual experiencing it (Arregui-Gallego, et al., 2025).

While moral distress discusses the ethical and emotional conflicts faced by workers, these ongoing pressures often intersect with occupational burnout. Understanding this burnout provides insight into the collective strain that stress and workload cause, which influences the health and well-being of respiratory therapists during and after the pandemic. Burnout, as previously defined, was a psychological impact to health and well-being caused by unresolved and untreated physical and emotional stress (Spirczak, Kaur, & Vines, 2022; Miller, et al., 2021a). Factors that increase burnout were identified as working overtime hours, working increased hours in the intensive care unit, working with adult patient populations, and extensively protocolized care delivery without transparency or clarity. Additionally, the COVID-19 pandemic revealed burnout stressors that were related to interruptions in work logistics. These stressors were related to staffing shortages, high workloads, mandated shifts, increased exposure to infection cases, and weak workplace leadership (Spirczak, Kaur, & Vines, 2022; Miller, et al., 2021a). More recent research confirms the continued experience of psychological distress amongst frontline healthcare workers (Shi, et al., 2025; Soto-Camara, et al., 2024). High levels of burnout, particularly in high-intensity care environments, cause the pre-existing stressors originally stemming from organizational and workload factors, to reach a critical level that became overwhelming and unmanageable to HCWs (Shi, et al., 2025; Soto-Camara, et al., 2024).

Healthcare workers had reported a positive relationship with their occupations prior to the pandemic; thus, the pandemic had a measurable impression on job satisfaction with an increase in trauma-induced anxiety and depression (Strickland, et al., 2022; Jang, et al., 2021). Safety concerns regarding a lack of sufficient break times during shiftwork, or forced extended work hours, and the uncertainty with long-term workloads also increase the levels of burnout reported in the literature.

Acknowledging the psychological harms on HCWs is the first step in rectifying the issues that occurred as a result. To prevent further loss in the professional market, the cultural and institutional changes that must occur were identified in the literature (Strickland, et al., 2022; Jang, et al., 2021). Recent intervention-based research started to explore solutions to these challenges, demonstrating how structured psychological and mindfulness-based interventions that are integrated into organizational supports, can help to reduce stress and improve coping capacities (Bagereka, et al., 2025; Meredith, et al., 2024). Structured organizational interventions that promote well-being have improved worker outcomes. Longitudinal intervention studies indicate that sustained psychological support can produce lasting improvements in mental health outcomes. Additionally, emerging interventions related to mitigating crises-related trauma emphasize the importance of implementing multi-level interventions that target both individual resilience and systemic workplace improvements. This shows that the solution to burnout is multi-faceted and is not solely an individual or structural issue (Bagereka, et al., 2025; Meredith, et al., 2024).

2.3.3. Identified Literature Gaps

Despite the rapid expansion of the body of research that examines the mental health of coworkers, particularly during the COVID-19 pandemic, several noticeable gaps still remain in relation to the specific experiences of respiratory therapists, the process of terminal extubation, and the use of qualitative descriptive methodologies to understand these phenomena in death.

The first prominent limitation across the literature is the lack of profession-specific focus, particularly regarding respiratory therapists (Wintermann, et al., 2025; Arregui-Gallego, et al., 2025). Large-scale quantitative studies examining psychological distress, burnout, and post-traumatic stress symptoms frequently aggregate many different healthcare roles into a single sample population. These studies also primarily recruit physicians, nurses, and nurse-adjacent professions into their data collection and analysis, limiting the ability to extrapolate their findings to the specialized field of respiratory therapy. While these studies establish the prevalence and

predictors of distress, they obscure the distinct clinical responsibilities and emotional exposures associated with different professional practices (Wintermann, et al., 2025; Arregui-Gallego, et al., 2025). In contrast, nurses are more strongly represented in both COVID-19 mental health research and end-of-life care literature (Kisorio & Langley, 2016; Ong, Ting, & Chow, 2017; Zhang, et al., 2024). This imbalance limits the transferability of these findings to respiratory therapists, who despite their close working relationship to the nursing profession, inhabits a different aspect of care when it comes to ventilator management and withdrawal of life-sustaining therapies. This difference in treatment withdrawal is both technically specialized and emotionally charged (Kisorio & Langley, 2016; Ong, Ting, & Chow, 2017; Zhang, et al., 2024).

Existing research solely focused on RTs remains limited in scope, despite the growing body of literature being developed (Miller, et al., 2021a; Spirczak, Kaur, & Vines, 2022; Allender, et al., 2023). Studies have documented burnout, moral distress, and workforce instability of the respiratory therapy profession during the COVID-19 pandemic. Unfortunately, these studies largely rely on quantitative, survey-based designs and do not sufficiently portray how RTs interpret their emotions and make meanings out of their distress (Miller, et al., 2021a; Spirczak, Kaur, & Vines, 2022; Allender, et al., 2023). A small number of qualitative studies that involve respiratory therapy do exist; however, these typically examine RTs within a mixed professional group, or within the broad overall intensive care unit experience (Milo, Gomez, Suarez, Calero, & Connelly, 2023; Tratchenberg, et al., 2022; Cullum, Madani, Cutler, & Reavis, 2022). Absent are the studies that focus specifically on respiratory therapists and addresses the experiences stemming from performing withdrawals of life-sustaining therapies, whether through the utilization of quantitative or qualitative study designs. Though this work predates or at least is only partially situated within the COVID-19 context, highlighting a gap in pandemic-specific understanding is a significant need (Milo, Gomez, Suarez, Calero, & Connelly, 2023; Tratchenberg, et al., 2022; Cullum, Madani, Cutler, & Reavis, 2022).

Another identified gap relates to the limited amount of literature that considers terminal extubation as a distinct clinical and emotional event. While end-of-life decision-making and withdrawal of life-sustaining therapies have been explored with nursing and physician populations, these studies rarely highlight terminal extubation specifically or examines the experiences of those who physically perform the procedure (Choi, Rodgers, Tocher, & Kang, 2022; De Boer, Reimer-Kirkman, & Sawatzky, 2022; Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022). Earlier publications on clinical perceptions of terminal extubation and ICU experiences situated in the broader scope of end-of-life care, occur prior to the pandemic and therefore do not reflect the unique conditions of COVID-19. The impact of visitation restrictions, resource scarcity, and heightened morality are largely missing from this body of research (Choi, Rodgers, Tocher, & Kang, 2022; De Boer, Reimer-Kirkman, & Sawatzky, 2022; Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022). More recent studies that occurred during or after the COVID-19 pandemic do in fact, address end-of-life care, but examine the system-level processes or generalized emotional distress, rather than the nuanced experiences of RTs. Therefore, the emotional and moral complexities of this procedure, and the ways it was altered by COVID-19, continues to be insufficiently explored.

This literature review also showcased the overreliance on quantitative methodologies and outcome-focused research in comparison to qualitative methodologies that create themes and patterns. Cross-sectional surveys and cohort studies make up the majority of the literature in the field, and emphasize measurable constructs such as anxiety, depression, and burnout (Bagereka, et al., 2025; Kanstrup, et al., 2024; Meredith, et al., 2024). However, these studies provide narrow insights into the contextual and relational dimensions of distress, despite their value in identifying the scale of psychological impact. There exists a need for balance in terms of the ways the human experience is measured and discussed, ensuring that the approaches used are flexible, yet structured enough to capture the nuance of human nature (Bagereka, et al., 2025; Kanstrup, et al., 2024; Meredith, et al., 2024). Early intervention studies prioritize symptom reduction, but do not

fully understand the underlying experiences they aim to address (Rizzi, et al., 2025; Ruple, et al., 2024). The methodological gap underscores the need for qualitative approaches to generate clinically grounded accounts that remain close to participants' perspectives and inform practice (Rizzi, et al., 2025; Ruple, et al., 2024). Relatedly, there is also a lack of research that looks at the longer-term and cumulative impact of repeated exposure to death and dying during the pandemic (Gjessing, Steindal, & Kvande, 2023; Laurent, Bonnet, Capellier, Aslanian, & Herbert, 2017; Wintermann, et al., 2025). Some longitudinal studies were conducted, it similarly, lacks the involvement of terminal extubation focuses and the evolution of meaning generated by these experiences as time progresses. Additionally, contextual factors such as interprofessional collaboration, institutional dynamics, and communication processes are not thoroughly integrated into studies of respiratory therapists' psychological distress, despite the influence of these factors on end-of-life care experiences (Gjessing, Steindal, & Kvande, 2023; Laurent, Bonnet, Capellier, Aslanian, & Herbert, 2017; Wintermann, et al., 2025).

These identified gaps provide the rationale for my present study. By focusing specifically on respiratory therapists in Manitoba, this thesis responds to the profession-specific gap in the literature (Miller, et al., 2021a; Allender, et al., 2023). This contributes insight into an underrepresented group whose experiences have often been assumed under previous broader interdisciplinary studies. By centering on terminal extubation and ventilator withdrawal during COVID-19, this research also addresses the limited exploration of this procedure as a distinct clinical, and emotionally complex event, particularly within pandemic contexts. Common pandemic-related constraints identified were visitation restrictions, resource scarcity, and changing institutional policies (Miller, et al., 2021a; Allender, et al., 2023). Through the use of a descriptive qualitative methodology, this study seeks to move beyond prevalence-based understandings of burnout and psychological distress by capturing firsthand accounts of how respiratory therapists interpret, navigate, and create meaning to these experiences in their professional and personal lives

(Sandelowski, 2010; Colorafi & Evans, 2016). In doing so, this thesis contributes to contextual knowledge that may inform future research, organizational supports, and clinical interventions. The importance will be the added aim of improving the well-being and retention of respiratory therapists and other healthcare professionals involved in end-of-life care (Sandelowski, 2010; Colorafi & Evans, 2016).

In summary, this literature review conducted twice initially in December 2023 and March 2024, before an additional search was conducted in March 2025 to assess the current studies published that address the objectives and topics of my thesis. These results of the review show that the growing body of research knowledge is limited by a lack of focused attention on respiratory therapists, minimal exploration of terminal extubation as a uniquely difficult and complex ethical practice. The dominance of quantitative study methodologies in comparison to all other study designs overlooks the depth and breadth of lived experience. These gaps highlight the need for qualitative descriptive research that is centered around respiratory therapist perspectives, in a way that provides a balance of nuance and practical understandings of these events. This will help us to create a fuller description of the psychological distress associated with performing terminal extubation during the COVID-19 pandemic.

3.0. Methods

This thesis is a study nested within a larger qualitative study titled *Performing Terminal Extubation: Experiences of Respiratory Therapists.* The principal investigator for this larger project is Dr. Louise Chartrand, who started the study in 2019 with 26 respiratory therapists interviewed from both Canada and the United States. The umbrella research project focuses on investigating the experiences of terminal extubation among Canadian and American respiratory therapists, and as this study was conducted prior to 2020, this study collected data from pre-pandemic experiences. This initial project was paused during the COVID pandemic and for the principal investigator's maternity leave, whereas my thesis project takes place after COVID-19. My thesis project had the following objectives:

1. Describe how Manitoba respiratory therapists perceive their role in decision-making and terminal extubation.
2. Describe the emotional impact of withdrawing ventilatory support on Manitoban respiratory therapists.
3. Describe how COVID-19 impacted the experiences of terminal extubation and ventilator withdrawal for Manitoba respiratory therapists

3.1. Methodology

Research formulation and dissemination rely heavily on the application of its conclusions and the concept of *what* we can acquire knowledge about (Moon & Blackman, 2014). The human world has in it, complexities that determine what is and is not "real" enough to be studied, and the entities that exist without human intervention could be considered an objective constant. This means that these would have existed whether humans were around to perceive and interact with it. However, the objectives of my thesis sought to answer questions that intimately study human nature and the interactions that occur in its foundation. Therefore, the definitions that I use as to what should be considered "real" must include more figurative contexts in order to encompass how

humans shape and use these entities, which ultimately, give it life (Moon & Blackman, 2014). How we define realness for knowledge creation are guided through different ontologies, each with their own categorizations for what constitutes reality and how humans operate within it (Slevitch, 2011). Ontology is defined as the study of the concept of reality and how research paradigms determine "real" ideas and notions that can be identified and interpreted. My thesis is situated in the relativist ontology, whose perspective dictates that multiple realities can exist simultaneously, with any phenomenon within it adopting many interpretations based on the subject interacting with it, and each interpretation being equally as valid and as real as the next. Relativism operates with the understanding that knowledge is created through the perspective of the individual interacting with it, and therefore, also creates its meaning in how it is used by the individual (Slevitch, 2011).

The relativist perspective provides the breadth and depth of interpretation required to understand the experiences of the respiratory therapists that I have recruited as my research study participants. Relativism pluralizes the term "reality" in order to recognize that multiple realities exist distinctly separate, yet simultaneous as experienced by humans (Ugwu, Ekere, & Onoh, 2021). The respiratory therapists that I have interviewed as individuals, contain multitudes, and the data collected contain a wide range of accounts, all impacted by the identities they define themselves with. An ontology that can accept his variability will strengthen the data analysis of this study as there is no concept of a "correct" or "incorrect" reaction to a human experience in its terms (Ugwu, Ekere, & Onoh, 2021).

While ontology frames the reality in which we determine what is real and can be studied, epistemology is responsible for determining how knowledge comes to existence and the criteria by which it is considered legitimate for future research use (Moon & Blackman, 2014). Epistemologies also acknowledge how investigators may influence the information being created and how it is communicated to others. My thesis project utilizes the subjective epistemology under the constructivism paradigm, which is defined as the creation of values, ideas, and perspectives through

the interpretation of the user, rather than objectively determined separate from society (Moon & Blackman, 2014). My project's study had both the researchers and participants involved in data formation, with the information collected representing the subjective experiences of the participants themselves. The social processes of this qualitative research will generate the interaction that will inform the researcher's understanding of the engagement taking place. The topic of interest in my thesis is based on the healthcare system, which is complex and contains evidence-based foundations that are sourced almost authoritatively by experts, organizations, and regulated institutions (Slevitch, 2011; Ugwu, Ekere, & Onoh, 2021). Yet, the participants in this study use the healthcare system in a way that relies on their beliefs, values, and feelings. The decisions that they make within their practice are driven through their own identities and past experiences that are embedded in their interactions, making the knowledge shared more intuitively. The conclusions drawn from this data will contain all the nuance and intricacy typical of human nature, therefore utilizing any other epistemology will result in interpretive limitations to solely objective facts, creating a disparity between the functional ontology and paradigm (Slevitch, 2011; Ugwu, Ekere, & Onoh, 2021).

3.1.1. Qualitative Description

A research study must meaningfully address its research question to ensure that an appropriate methodology has been selected (Creswell, 2014). My thesis adopts a qualitative methodology to encompass the complex social phenomena depicted in our participants shared experiences and stories, while maintaining their natural contexts. Qualitative methodologies are important for research that seeks to understand meanings, perspectives, and processes rather than to measure variables or calculate statistics. Qualitative methodologies exist to support flexibility and reflexivity throughout the research process, enabling the study to remain responsive to emerging insights (Creswell, 2014). For these reasons, and the thesis objectives, the qualitative

description methodology was selected as the most appropriate approach for achieving the aims of this study.

Qualitative description (QD) was selected for this thesis because of its logical process, yet minimal interference with the type of data being collected from these participants (Sandelowski, 2000). QD offers a way to expansively summarize events and experiences that still preserve the individual nature even after interpretation. By using the language and nuances reported by respiratory therapists, an accurate account of events can be maintained and can increase the validity of the dataset (Sandelowski, 2000). Forming descriptions regardless of the method, involves researchers making decisions about what content is conveyed, but QD guarantees interpretive validity as events are communicated by individuals' own sequence and depictions (Sandelowski, 2000; Bradshaw, Atkinson, & Doody, 2017). The final conclusions stay true to the raw data as there are no additional interpretations made by the researchers. Since I have conducted this project as the main researcher, the framework of this methodology allowed me to present evidence in common terminology, which contrasts from methodologies where researchers are expected to implement their own interpretations. QD provides an assumption that there are no externally imposed influences, keeping the data true to the participant (Sandelowski, 2000; Bradshaw, Atkinson, & Doody, 2017). Through my best efforts, I have attempted to maintain my objectiveness throughout the entirety of my thesis.

Qualitative description is also well suited for semi-structured interviews, as it ensures that researchers are able to implore participants to provide detailed accounts of their experiences, while still maintaining the flexibility to elaborate on topics that individuals find important, or particularly moving (Sandelowski, 2010). Respiratory therapists primarily operate in allied healthcare fields, making their accounts more related to their roles, clinical decision-making, and evidence-based practice. Therefore, qualitative description provides a methodology that is able to summarize the scope of this data more comprehensively as it does not require extensive theoretical applications.

The framework that is being created can be formed to fit the nature of the data as it occurs, rather than attempting to make the data fit an already constructed framework (Sandelowski, 2010).

3.2. Health Research Ethics Board Approval

A health research ethics board application for the larger overarching project titled *Performing Terminal Extubation: Experiences of Respiratory Therapists* was submitted and approved on April 18, 2022 (HS22819, H2019:181). This HREB application contained a detailed plan of the larger project, the study protocol, interview guide, participant informed consent form, and recruitment materials. An amendment was filed on February 1, 2025, to include a study protocol with an added objective that addressed the context of incorporating COVID-19 into the research question and study rationale of this thesis. As a result, relevant amendments to the interview guide, participant informed consent form, and recruitment materials were also included in the HREB amendment application. The full *Informed Participant Consent Form* can be found in *Appendix B.*

The University of Manitoba Health Research Ethics Board approved the amended ethics application (HREB HS22819 & H/B H2019.181) on March 7, 2025. This enabled the initiation of participant recruitments by the graduate researcher and thesis advisor. HREB approval was confirmed and obtained prior to any recruitment and communication with prospective participants.

3.2.1. Participant Safeguards

It is acknowledged that the topic of this thesis delves into sensitive matters that may be difficult or triggering for participants to discuss. To safeguard their mental health and well-being, all advertisement materials related to this project clearly state the intent and subject of the interviews. A thorough review of the consent from and interview process was reviewed with each participant prior to meeting and again at the start of the interview. This is indicated in existing literature as best practice procedures (Clay, 2020). The guiding principles for ethical research were followed, which include foundations in respect, confidentiality, and informed consent. Not only are participants guaranteed a safe and respectful environment during all stages of the study, but their right to

privacy is maintained as utmost importance. Only the minimum amount of identifying information needed for the study was collected to ensure confidentiality and security (Clay, 2020).

Various security measures were also utilized to maintain the protection and safety of participants (National Institutes of Health, 2016). These included: securely deleting data that was no longer needed, ensuring data was de-identified, using passwords and encryption software for data stored electronically, and storing physical data in secured locations only accessible to authorized individuals. Lines of communication were established with participants to notify them of any new information that might occur during the study, results of the project, and availability of the final publication. Participants were also invited to contact the researcher at any time if any other questions or concerns arose regarding the study or their participation (National Institutes of Health, 2016).

Appropriate risk assessment was conducted to ensure that any potential harm or possible risks that participants may encounter were identified and made aware of prior to data collection (Queen's University Research Ethics Boards, 2023). During and after the study, any relevant supports or resources that may be helpful to participants were communicated to them. This included debriefing sessions after the interview, debriefing sessions prior to any publication, mental health referrals, and suggestions for support groups. The health and well-being of participants were monitored, and the researcher provided connections to appropriate services if any adverse effects were experienced. Participants were also able to withdraw from the study and withdraw their data, at any time of their choosing without penalty (Queen's University Research Ethics Boards, 2023).

3.3. Sampling and Recruitment

In the first round of recruitment, participants were invited to participate through an open call advertisement sent through respiratory therapy related groups, such as:

- Respiratory Therapy Breakroom – Facebook special interest group
- Canadian Society of Respiratory Therapists – national professional credentialling body

- Sepsis Canada & LIFTING Network – national CIHR coordination group
- Manitoba Association of Registered Respiratory Therapists – provincial regulatory body
- Society of Manitoban Respiratory Therapists – provincial advocacy group

Respiratory therapists who self-identified as meeting the advertised inclusion criteria were invited to contact the research team email in order to establish communication regarding an interview date and time. Some of the organizations I collaborated with advertised to both American and Canadian respiratory therapists, but as complexities between the public health measures from each country created notable differences, my focus was to purposively sample from the Canadian respiratory therapist respondents.

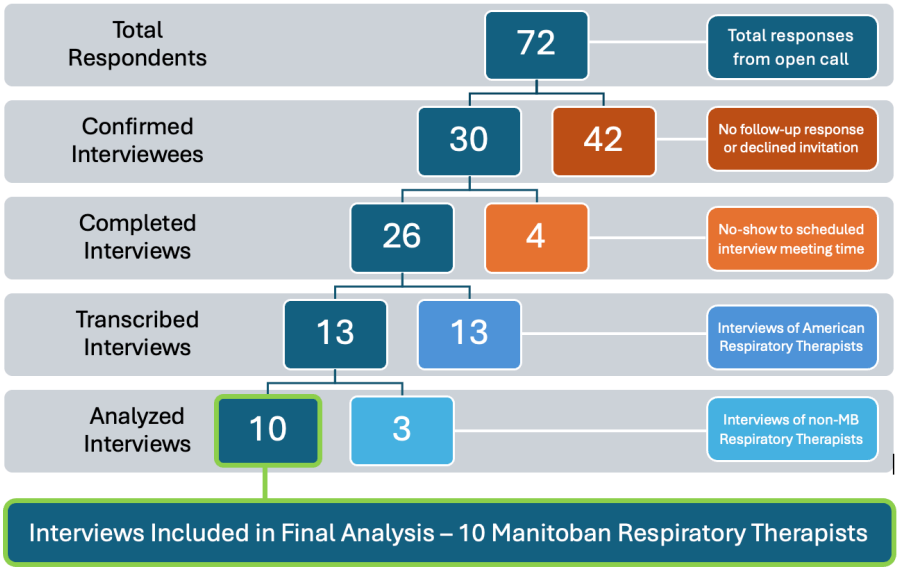
Overall general recruitment for the larger study was conducted between April 2025 to September 2025, with a cease in active recruitment to complete the data analysis and thesis work for this smaller project. Ethics-approved recruitment materials were circulated through Manitoba regulatory bodies, professional associations, and supervisory staff at all Manitoba hospitals. Additionally, recruitment materials were also posted to online special interest groups on social media platforms, such as Facebook and Instagram. By responding to the public call out, respiratory therapists were fulfilling the initial inclusion criteria of self-declaring professional involvement in terminal extubations during the COVID-19 pandemic, of which participants were able to self-determine these definitions. To progress along in recruitment, participants had to:

1) be able to give informed consent,
2) provide their professional respiratory therapy practice license identification,
3) have a computer or mobile device with internet access
4) be able/willing to meet virtually on an online meeting platform, and
5) communicate with researcher to finalize an online meeting time.

All criteria had to be fulfilled for participants to receive an online meeting invitation containing the platform link. Furthermore, the participants all had to be able to speak and

understand English. The data collection from this thesis project occurred in stages, as depicted in Figure 3.3. below.

Figure 3.3. Participant selection for data collection and analysis.



My thesis data was collected from the fourth and fifth stage, where Canadian and American participants are identified from the total number of completed interviews, and Manitoban respiratory therapists are identified from the total number of Canadian interviews. Further details of this data will be discussed in the data collection chapter of this thesis. Participant tracking throughout all stages of recruitment was managed on Microsoft Excel 2025 Version 16.105 (26011018).

I purposively sampled respiratory therapists from Manitoba, Canada from the larger project's open call, allowing for maximum variation of demographics (identified gender, age, province/state) and career types (number years practicing, full time status, patient population). I targeted a sample size of a minimum of 10 and a maximum of 30 participants, with adjustments made to accommodate for data saturation. Overall recruitment goals were to aim for at least two interviews per Canadian province or territory. Researchers chose to focus this thesis on Canadian respiratory therapists from Manitoba due to the significant response of participants from this region.

3.3.1. Inclusion and Exclusion Criteria

The inclusion criteria for this thesis project were as follows:

1) Must be a licensed respiratory therapist in Manitoba,

2) Must have performed terminal extubation during the COVID-19 pandemic, and

3) Must be willing to have video camera on while conducting online interview.

Participants were able to self-determine the parameters that they considered "terminal extubation" or the "COVID-19 pandemic" to subvert institutional definitions that might deter potential participants from responding. For example, by avoiding defining the pandemic as "the period between January 2020 to December 2022" recruitment would be able to include participants that underwent significant pandemic-related experiences outside this time period, which would still be vital in collecting for analysis. Respiratory therapists also did not have to be titled "general duty" or "intensive care" RTs to be included in the study, as long as they were responsible for performing terminal extubation in their positions. Recruitment included redeployed respiratory therapists from other hospitals or care fields, or RTs that were clinical service leads and educators whose responsibilities changed during the pandemic due to staffing and workload issues.

Respiratory therapists who no longer worked in positions that perform terminal extubations, or who were promoted to other jobs/positions, were still included in this study as long as their previous extubation experiences were during the COVID-19 pandemic, as they would still be able to share their perspectives and stories during this time. Participants who were also no longer working in the respiratory therapy field, or in healthcare entirely, were still included if they had experiences that occurred during the pandemic period. All participants were asked to turn on their cameras during the online interviews to confirm their identity and to be able to note their non-verbal, body language in the data.

Exclusion criteria were minimal as respondents would typically voluntarily withdraw if they determined they did not fit the advertised recruitment criteria. Participants were excluded if any of the following criteria applied:

1) participant communication ceased during any phase of the recruitment process despite a maximum of three attempts at follow-up by the researcher, or

2) participant was unwilling to provide respiratory therapy license information, or
3) participant did not show up for scheduled online meeting and did not respond to a follow-up attempt, or
4) participants attended the scheduled online meeting but refused to turn on their camera.

All participants were asked to turn on their cameras during the online interviews to confirm their identity and to be able to note their non-verbal, physical communication that occurred during the interview. This was to ensure rigor and validity in the collected data.

3.3.2. Qualitative Tools

Data for this thesis project was collected using semi-structured interviews through virtual online meeting platforms as this was an efficient and effective use of the limited time, finances, and resources available to this graduate researcher. Online meetings is also an effective way to accommodate the different time zones and geographic locations of participants, as individuals were able to propose dates and times that fit their availabilities. Semi-structured interviews provide a general plan that establishes a platform for participants to voice their experiences and share their stories (Sandelowski, 2000; Braun & Clarke, 2013). Interviews of this nature collects data in a way that captures the intimate, reflective perspectives of respiratory therapists in the study population, while remaining flexible enough to allow participants to use their own language and terminology to communicate the nature and shape of their experiences. As initial participants will reflexively shape future interviews, analysis of this data is unlikely to be linear, which requires a methodology that accommodates new data or themes that emerge from the unprecedented nature of the COVID-19 pandemic (Sandelowski, 2000; Braun & Clarke, 2013).

The online platform that these semi-structured interviews will be conducted in also provide considerable benefits to the thesis project (Oliffe, Kelly, Gonzalez-Montaner, & Yu Ko, 2021). The benefits include providing a private setting for discussion, provide the ability for researchers to process the expressions and body language, and provide better understanding of language

expressions and intonation cues (Oliffe, Kelly, Gonzalez-Montaner, & Yu Ko, 2021). Participants could mimic the nature of a casual conversation where interviewees are able to control the narrative and speak their feelings to their fullest extent (Sandelowski, 2000; Bingham, 2023). Interviews are typically scheduled for 60 minutes, but the participants were able to determine the length of time they wish to take, as the interview structure allowed flexibility in adjusting for this duration. Additionally, interviewees had the possibility to cease discussion of topics at their choosing and can conclude the interview at any point without repercussion (Sandelowski, 2000; Bingham, 2023).

Disadvantages to the virtual semi-structured interviews relate to technological savviness of participants and the limitations of software technology that often occur unexpectedly (Wakelin, McAra-Couper, & Fleming, 2024). Difficulties with internet service connections can, at times affect the quality of the video and audio during the online meeting. This can result in the delayed start of an interview or cause the interview to be rescheduled in its entirety, risking the continued participation of the interviewee. Furthermore, additional failed attempts at meeting successfully could result in the participant withdrawing from the study. Additionally, slow internet that causes lagging or temporary disconnection, could compromise the interpersonal connections being made between the researcher and the participant, and affect the quality of the data being collected. Therefore, it was extremely important for both researchers to be proficient with operating the MS Teams platform and provide troubleshooting and assistance to participants that incur issues with it (Wakelin, McAra-Couper, & Fleming, 2024).

The recruitment process generated 72 total responses to the initial call to action, occurring between April 2025 and June 2025. The second stage of the recruitment process resulted in 30 confirmed interviewees that signed and returned the informed consent form, verified their professional license registration, and confirmed a mutually agreed upon virtual meeting time. It was at this point that participants were sent an MS Teams meeting link via email, which would become

active on the date and time of their interview. The third stage of the recruitment process depicts interviews that were completed and transcribed in preparation for analysis. These interviews occurred between April 2025 and July 2025, where 4 participants were no-shows, with no response to follow-up emails.

Figure 3.4: Interview Guide Questions

Introductory Questions

1. Do you have any questions regarding the participant consent form that you filled prior to this meeting?
2. Demographic Questions:
   a. What is your age?
   b. What gender do you identify with?
   c. How many years have you been a practicing RT?
   d. Where (state/province) did you practice during COVID-19?
   e. What was the primary patient population that you conducted terminal extubations on?
3. How often were you assigned to the intensive care unit (or equivalent full-time status) during the pandemic?
4. What drew you to the RT profession?
5. What are the most important skills and qualities that a respiratory therapist should have to work in this job?

Discontinuing Life Support

6. What is your overall general philosophy or beliefs regarding mechanical ventilation?
7. Can you explain how decisions to withdraw life support were made in your facility?
8. Can you describe the RT role in the process of withdrawing life support?
9. Can you share an experience with terminal extubation where you were particularly affected, emotionally or morally?
   a. How did you feel during or after the event?
   b. Did you experience any emotional or moral distress?
   c. How did you cope with these feelings at the time?
10. Did your reference points change in terms of what you find distressing? *
11. Have you ever felt that your role in the withdrawal process went against your personal values or beliefs?
    a. If so, can you describe the emotions that you felt?
    b. How did you respond to this event afterwards?

The COVID-19 Pandemic

12. What was your overall experience during the COVID-19 pandemic?
13. What changes were implemented at your facility that most impacted your respiratory practice?
14. What was your experience with mechanical ventilation during the pandemic?
    a. Did this differ from your experience prior to the pandemic?
15. How did the decision-making process of terminal extubation change in response to COVID-19?
16. How did your RT role in the process of terminal extubation change in response to COVID-19?
17. Did any of the changes in terminal extubation practices conflict with your moral beliefs or values?
    a. Can you describe how that made you feel?
    b. Were there specific situations where you felt morally distressed?
18. Can you describe any strong emotions felt during the pandemic?
    a. Were there any triggers or factors you noticed?
    b. How did you manage those feelings at the time?
19. Do you feel that RT was prioritized in terms of resource allocation/management during the pandemic? *
20. How did the pandemic impact your professional identity?
21. How did the pandemic impact your personal life and relationships?

Conclusion

22. Is there anything that you were hoping I would ask and didn't?
23. Is there anything else that you wanted to discuss at this time?

Notes: The full interview guide can be found in Appendix A.
*These questions were added after initial round of interviews.

3.4. Data Collection

Data was collected through semi-structured, virtual online interviews that followed the proposed interview guide, based on the literature review and input from the thesis advisor depicted in Figure 3.4. Interviews were conducted by either the graduate student, thesis advisor, or a combination of both. Each interviewer was experienced in providing qualitative research interviews with an established researcher relationship, but no formal oversight. Both researchers reflected on their preconceptions regarding the subject matter of this thesis project, which included their own experiences and beliefs about numerous topics such as the respiratory therapy profession, mechanical ventilation practice, and the COVID-19 pandemic, prior to any interviews being conducted. This measure was done increase researcher reflexivity and to acknowledge the researchers' own perspectives, to prevent influencing the interviewees'

participation (Skov, Østervang, Brabrand, Lassen, & Møller, 2024). I previously discussed my positionality in relation to my project in the methodology chapter of this thesis.

3.4.1. Online Semi-Structured Interviews

Interviews were conducted via the Microsoft Teams platform through the secure and encrypted University of Manitoba server, to accommodate the geographic locations and time zone differences of participants. Interviews were recorded through an audio recorder device, and not through cloud-based programs in order to ensure the security and confidentiality of the participants. The audio files were transcribed by either the graduate student or an associate from Point West Transcription Services. Following verbatim transcription, all transcripts were uploaded to a qualitative data management software program, NVivo v.15.3.0 (2025), with an inductive data-driven approach for analysis being used.

The questions in the interview guide were developed based on the study questions and study objectives of my thesis, listed in the introduction chapter, as well as professional input from the thesis advisor. The interview guide was modified after the first set of interviews, in order to include additional questions regarding topics that came up frequently among participants. The final interview guide with pre-amble can be found in *Appendix C: Full Interview Guide*. Each participant was asked the questions listed in Figure 4.4., albeit the wording and order of the questions in the guide were at times, asked out of sequence in order to facilitate a natural style of conversation between the researcher and the interviewee. However, the researchers ensured that all questions were asked by the time each interview had concluded.

All participants were asked to review the Informed Consent Form, declare their status as a respiratory therapist, and provide their license number to confirm their registration with their professional regulatory body, if necessary. The process of selecting Manitoban RTs through the recruitment process was previously indicated in Figure 4.3. An audit trail was kept and recorded

and can be found in *Appendix D: Audit Trail Table* and was managed using the NVivo 15 (v.15.3.0) program. The full code lists can be found in *Appendix F: Hierarchy Chart of Codes.*

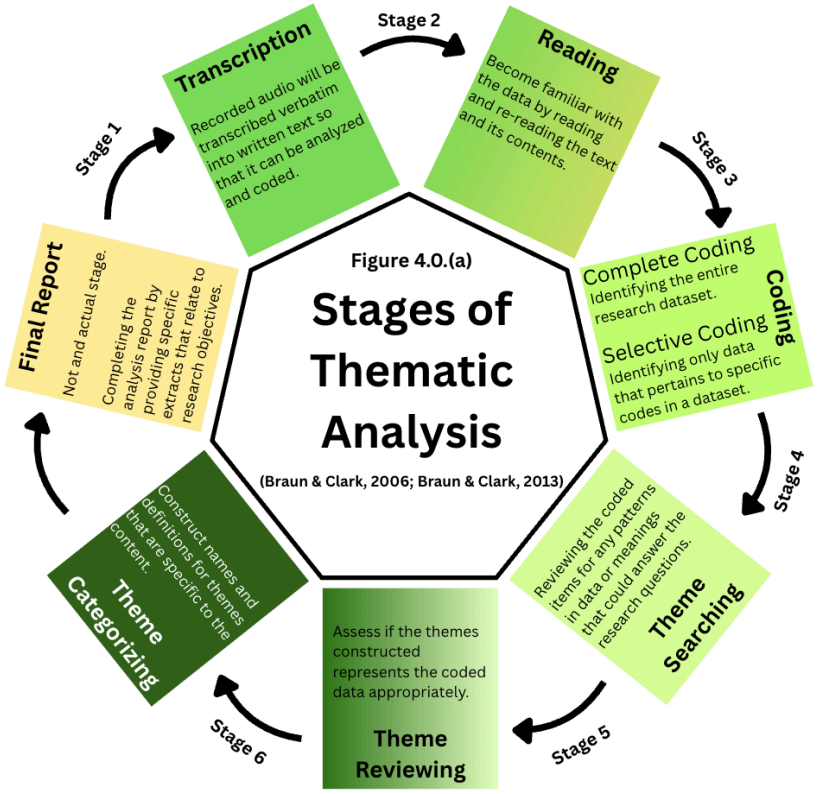
4.0. Data Analysis

This section explains how I analysed the transcriptions. I decided to use inductive thematic analysis to answer my research objectives exploring the experiences of respiratory therapists that conducted terminal extubations during the COVID-19 pandemic. Data analysis for this project must be broad enough to encompass the descriptive and explanatory relationships within the information being collected yet structured enough to maintain the original subjective narratives of the study participants (Gale, Heath, Cameron, Rashid, & Redwood, 2013). With the use of semi-structured interviews as a collection tool, a comparable analysis framework that is best suited for text-based data was selected in order to uphold rigour and precision. Analysis methods should have the capability to process results in multiple iterations, with modifiable applications after each cycle of analysis. Since interviews were conducted over the course of some months-long period, data may be reviewed multiple times as additional interviews are completed, creating a final set of themes and categories that may have a different organization in its final review when compared to its first inception (Gale, Heath, Cameron, Rashid, & Redwood, 2013).

As explained in the ethics procedures, participants were assigned a pseudonym to be able to organize and reference documented text. This pseudonym will be used to reference quotes and data pertaining from their specific transcript in order to maintain anonymity and confidentiality. Any information that is potentially identifying were either generalized or removed entirely while ensuring that the intent of the data is maintained. This includes but is not limited to, hospital names, staff names, city/street/neighborhood names, local colloquialisms, and unique physical/visual characteristics. The pseudonym's used through the entirety of this thesis are either the products of the author's imagination or were randomly generated using an online random name generator. Any resemblance to actual persons with similar names, living or dead, is purely

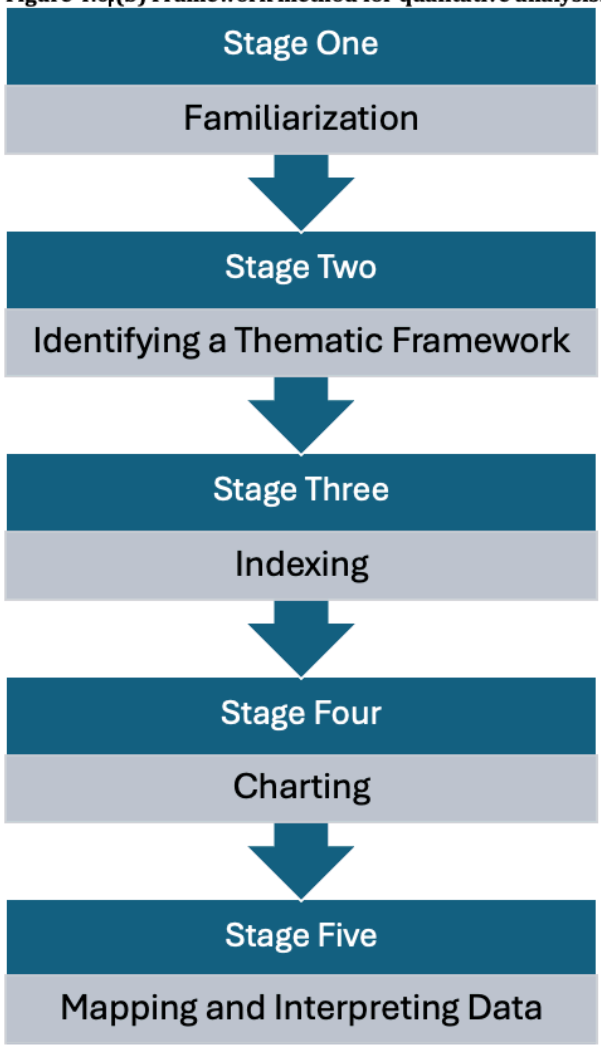
coincidental. The pseudonyms used are fully listed in Table 4.2. *Participant Audit Trail* or in *Appendix D: Audit Trail Table*.

Thematic analysis was the method chosen for identifying and observing patterns and key ideas within the collected data for this thesis project (Braun & Clarke, 2013; Gale, Heath, Cameron, Rashid & Redwood, 2013). This method involves the coding of qualitative data into emerging categories, which are then grouped into identifiable themes that produce an understandable narrative of the participants' experience. For this thesis, the 6-stage process of thematic analysis as described by Braun and Clarke was used to generate the coding structure for this study – depicted in Figure 4.0.(a). To supplement this process, selected aspects of the Framework Method for Qualitative Data Analysis will also be used, as depicted in Figure 4.0.(b). The following sub-chapters will detail the events in each stage of coding, concluding with the final version of the reported data themes (Braun & Clarke, 2013; Gale, Heath, Cameron, Rashid & Redwood, 2013). This modified coding approach was trialed on the first 5 Manitoban RT interviews and reviewed with my thesis advisor to ensure that the observations and themes emerging from this method would sufficiently answer my study questions.



4.1. Data Organization

Figure 4.0 (b) Framework method for qualitative analysis.



This thesis project was guided by the proposed research questions and study objectives previously discussed in earlier chapters. The coding approach I selected to create my qualitative analysis strategies was a combination of the 6-stage process outlined by Braun and Clarke and specific aspects of the Framework Method for Qualitative Analysis (Braun & Clarke, 2013; Gale Heath, Cameron, Rashid & Redwood, 2013). The overview of the process utilized is depicted in Figure 4.5.(a) and 4.5. (b). Prior to the first stage, the data organization phase began with an initial brainstorming of potential topics and ideas to guide the first round of data evaluation. This occurred while recordings were awaiting transcription and continued through the entire study. Previously reviewed data may have been returned to in order to re-assess it against newly added themes (Braun & Clarke, 2013; Gale, Heath, Cameron, Rashid & Redwood, 2013).

Following this brainstorming activity, summaries of general findings that represented overall descriptions of participant's experiences were formulated in order to better guide the subsequent stages of the coding process. Reflexive notes by the interviewer were also reviewed and reflected upon in order to incorporate ideas and modifications into future interviews.

4.2. Data Transcription

After each interview concluded, the recording was transcribed verbatim into a text document, the transcriptionist responsible for completing the final transcript for each interviewee is also indicated in Table 4.2. *Participant Interview Data*. This step is important as it will ensure what is said and how it was said is included in the data coding stage. Interview transcript documents were uploaded to NVivo.15.3.0 2025 to prepare for the next stage of data analysis. Once transcripts were uploaded to the NVivo program, electronic files of recordings were removed from desktop storage and placed onto an external USB drive, stored securely in a private home office and password protected to ensure confidentiality and security.

Table 4.2. Participant Interview Data

Participant	Gender (Self-Identified)	Age (Years)	#Profession Years	EFT in ICU	Patient Population	Interviewer	Interview Date	Interview Duration	Audio Transcriber
Anne	F	60+	30+	30% of 0.6 EFT	Adults	LC/LS	08-Apr-25	47 min 05 sec	LS
Brooke	F	30-39	0-9	100% of 0.6 EFT	Adults	LC/LS	10-Apr-25	48 min 48 sec	LS
Carly	F	30-39	10-19	90% of 0.6 EFT	Neonates	LC/LS	11-Apr-25	92 min 28 sec	LS
Daniel	M	30-39	0-9	100% of 0.8 EFT	Adults	LS	15-Apr-25	30 min 22 sec	PWTS & LS
Evelyn	F	20-29	0-9	80% of 0.8 EFT	Adults	LS	16-Apr-25	25 min 51 sec	LS
Frank	M	30-39	10-19	100% of 1.0 EFT	Adults	LC	22-Apr-25	85 min 16 sec	LS
Grace	F	60+	30-39	100% of 1.0 EFT	Neonates	LS	28-Apr-25	67 min 30 sec	LS
Henry	M	20-29	0-9	95% of 1.0 EFT	Adults	LS	02-May-25	64 min 42 sec	PWTS
Irene	F	30-39	10-19	100% of 1.0 EFT	Adults	LS	06-May-25	49 min 07 sec	PWTS
June	F	30-39	10-19	100% of 1.0 EFT	Adults	LS	04-Jun-25	37 min 16 sec	PWTS

Note: In cases where two interviewers are listed, the underlined initials indicate the lead interviewer.
Legend: F – Female, M – Male, EFT – Equivalent Full Time, LS – Lea Soliman, LC – Louise Chartrand, PWTS – Point West Transcription Service

4.3. Data Familiarization

The process of data familiarization embodies the first two stages of Braun & Clarke's (2013) thematic analysis process and the first stage of the framework method for qualitative data described by Gale et al. (2013) where the researcher becomes immersed in the data in order to be equipped for analysis.

Once all transcripts were uploaded, I read each one in its entirety to generate an extensive list of possible codes that would be applicable, which at its first iteration totaled 39 codes. After a total of 5 cycles of re-reading transcripts, combining similar codes for clarify, and excluding others for irrelevance, a tentative list of 21 codes was finalized. These codes were discussed and reviewed with the thesis advisor prior to the data coding stage with the understanding that as an iterative process, these codes may still change.

4.4. Data Coding (Complete & Selective)

The purpose of the data coding stage is to identify aspects that will answer the objectives of this research study. This step embodies the third stage of Braun & Clarke's (2013) thematical analysis process and the second and third stages of Gale et al.'s (2013) Framework Method. During this step, the entirety of coding is split into two phases: complete coding and selective coding. Complete coding involves analyzing the dataset as a whole and separating raw data into individual codes in order to create a representation of data frequency. Selective coding involves identifying common categories that ties codes together between datasets in order to ensure the representations identified tell a unified story (Braun & Clarke, 2013; Gale Heath, Cameron, Rashid & Redwood, 2013).

Each interview transcript was coded by classifying the text data based on common topics and patterns that I noticed among sections. Sections of transcripts that contained text that were not relevant to the study objectives (e.g. pre-amble or general conversation) were not coded or included in analysis. This method ensured that the findings maintained the initial meaning and intent of the data, which would adhere to the descriptive qualitative analysis. After the initial round of complete coding, irrelevant or uncommon codes were excluded, and the remaining set of codes were refined before utilizing them in another subsequent analysis round. This was followed by an initial round of selective coding where emerging categories were identified and refined before a second round of selective coding finalized the category list and established the overall themes.

4.5. Distinguishing Categories and Themes

Within qualitative analysis, categories and themes represent similar but conceptually distinct levels of understanding (Gale, Heath, Cameron, Rashid, & Redwood, 2013; Varpio, et al., 2021). Categories are primarily descriptive groupings of data that organize codes based on their related content or meanings but still remain close to the participants' accounts and reflect the common topics or experiences identified during coding. In the discussion of the Framework Method, the use of categories is described as a way to serve structure in the summarization and management of large qualitative data volumes, while still adhering to the contextual experiences of the interviewees (Gale, Heath, Cameron, Rashid, & Redwood, 2013; Varpio, et al., 2021). This will be important to ensure that the results presented align with the stories and accounts from the Manitoba respiratory therapists being interviewed.

Themes represent broader patterns of shared meaning that can extend across multiple categories and highlight the underlying significance of personal experiences in a way that might not necessarily be explicitly voiced (Braun & Clarke, 2013; Varpio et al., 2021). Rather than simply describing what participants have said, themes interpret how and why particular experiences are meaningful within the context of the research objectives. Themes become more abstract than categories due to their intent being to link the relationships between categories and the dataset as a whole. Development of themes also requires a more iterative, cyclical process that can continue to evolve as interview transcripts are processed as they also include researcher reflexivity exercises (Braun & Clarke, 2013; Varpio et al., 2021).

In this thesis, categories were developed during the selective coding process by grouping related codes that reflected common aspects of respiratory therapists' experiences with terminal extubation throughout the progression of the COVID-19 pandemic. These categories remained grounded in the data and were used to structure the analysis (Sandelowski, 2000). Themes were subsequently generated by examining patterns across categories to capture broader dimensions of

psychological distress. To keep consistency with the qualitative description approach, theme development is tied closely to participants' language and clinical context, with minimal abstraction beyond the data (Sandelowski, 2000). The distinction that informed this analytic process began with codes being organized into categories, and then categories being synthesized into overarching themes, constructed the results of this thesis. Maintaining this hierarchy enhanced the analytic clarity and ensured transparency for thesis discussion and final conclusions.

4.6. Theme Searching

All of the interviews included in this analysis went gone through approximately 4 rounds of coding as follows:

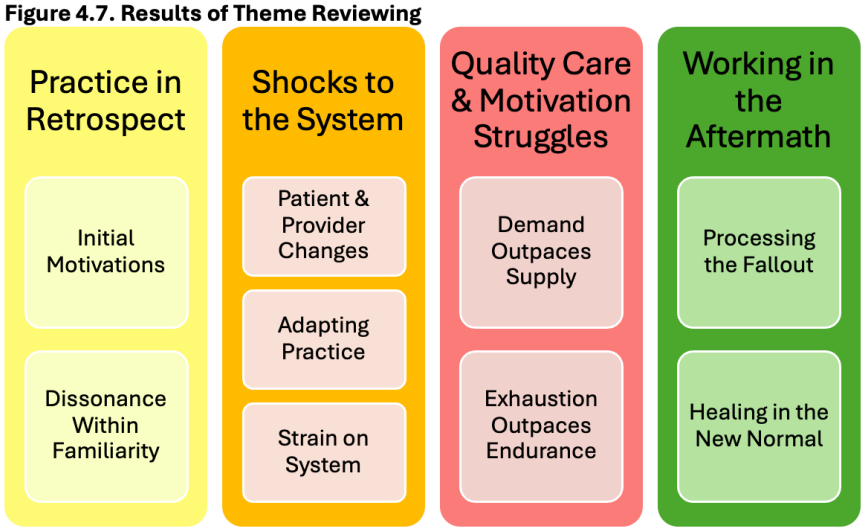
1. Primary complete coding – initial codes from raw data
2. Secondary complete coding – data coding from refined list
3. Primary selective coding – emerging categories from refined codes
4. Secondary selective coding – identified themes from finalized categories

During the third round of coding, patterns in the data or meanings were beginning to emerge, establishing an initial list of categories that the general codes were grouped in. Each interview, including their reflexive notes was re-read in order to ensure that the associated theme was kept close to its original meaning. Throughout this process, my thought process was documented through a researcher journal that was kept separately from the interview and reflexive note data in order to be able to establish an external, objective perspective on the stages of coding.

4.7. Theme Reviewing

The process of theme reviewing involves assessing fit of the constructed themes in comparison on the coded data (Braun & Clarke, 2013; Varpio et al., 2021). Clarity and concise definitions of themes provide rigor and structure to the thematic structure, providing a clear path from the original data to the analyzed conclusions. During this stage, theme labels are created, but not finalized, as they can be combined or separated as more familiarity with participant experiences are gained. The ability to contextualize the reflexive movement between data, emerging categories, and final themes provide a thematic structure that is not only transparent, but robust in nature in order to be able to deduce real-world applications (Braun & Clarke, 2013; Varpio et al., 2021).

Figure 4.7. Results of Theme Reviewing

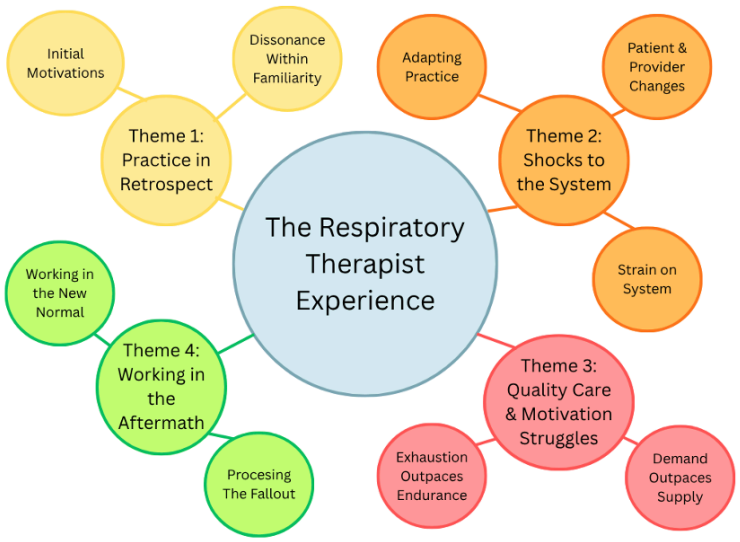


The extensive list of initial data themes that were generated in the previous stage were reviewed in order to exclude redundancy and combine similar themes to create stronger data groups. An initial list of 14 emerging categories among 6 themes were reorganized to a final list of 4 overarching themes encompassing 9 categories. The results of the theme reviewing stage are depicted in Figure 4.7.

4.8. Theme Categorizing

The purpose of theme categorization is to construct the final names and definitions of the overarching themes (Braun & Clarke, 2013). This is done to explicitly ground thematic analysis in the participant data. Setting the conceptual boundaries of each theme provides consistency and clarity of coding decisions and legitimizes the discussion that will occur with the dataset (Braun & Clarke, 2013). The final list of 9 categories across 4 themes were reorganized a final time in order to lay the theme categories in a more linear pattern, in this case, following a timeline period. By following a timeline, the researcher is able to depict how each theme flows into the next and the relationship between how data in each emerging category evolves as it follows. The results of the theme categorizing stage is depicted in Figure 4.5.8. Data excerpts that are representative of each category were also selected and included in the final report, as discussed below.

Figure 4.8. Results of Theme Categorizing Stage



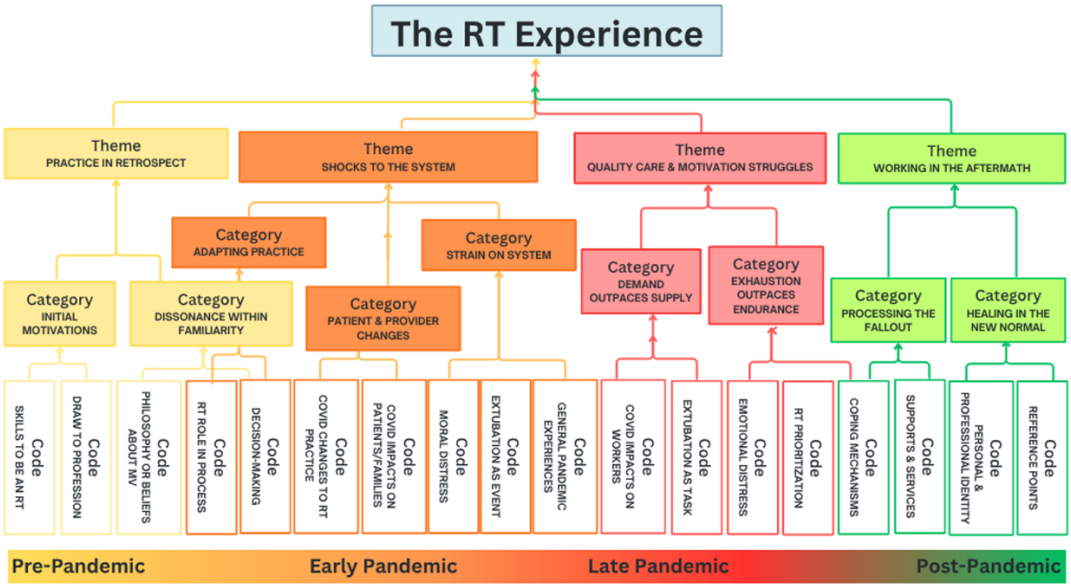
4.9. Final Report

The final phase of Braun and Clarke's (2013) thematic analysis process is the construction of the final report that includes the overarching themes, categories, codes, and excerpts that communicate the findings of the study. The objective of the final report is to layout the pathway that subsequent chapters and related discussion will take when each theme is presented and described with all the complexity and authenticity of its original data. Excerpts are chosen to provide mental illustration of the mental and emotional portrayals of human nature captured in the semi-structured interviews. By creating a sound thematic structure that closely resembles respiratory

therapy experiences, the discussions in this thesis will better align with existing literature and current knowledge. This will be vital in addressing moral distress, emotional exhaustion, and interprofessional collaboration (Braun & Clarke, 2013).

Creating this final report involves providing a visual representation of this work in order to illustrate where each data point exists in the overall structure, which can be found in Table 2. This phase was centered around the focus of respiratory therapy and its relationship to the moral and emotional aspects of terminal extubation in the context of the general pandemic timeline. The full theme and category tree that was generated from this final report is depicted in Figure 4.5.9.

Figure 4.9. Complete theme and category tree.



4.10. Initial Findings

After completing the 6-stage process of thematic analysis and modified framework method for qualitative analysis, the results were organized into a final thematic structure. Four (4) main themes, which among them are composed of nine (9) emerging categories, are supported by codes and quotations from participants, representing the significant findings shared in their interviews. This analysis focuses on describing patterns and variations without interpretation, which was done intentionally to preserve the true perspective of the participant experiences collected. The full

descriptions of the themes and subsequent categories will be addressed in the thesis discussion chapter.

A visual representation of the final data report was illustrated with a theme map previously shown in Figure 7 and 8. The four themes that describe the data are as follows: 1) practice in retrospect – *pre-pandemic phase,* 2) shocks to the system – *early pandemic phase,* 3) quality care and motivation struggles – *late pandemic phase,* and 4) working in the aftermath – *post-pandemic phase*. In this order, the related categories depict the journey of the respiratory therapist experience during the COVID-19 pandemic. Each theme will be further explored in this subsequent discussion chapters.

4.11. Researcher Reflexivity

This thesis project follows the tenets of qualitative description, which seeks to describe participant's experiences with as straightforward perspective and as little inference as possible. However, as the researcher plays a direct role in the collection of this data, their involvement is still central throughout this process (Bradshaw, Atkinson, & Doody, 2017; Sandelowski, 2000). To achieve this, researcher reflexivity measures were integrated into the data collection and analysis processes. Reflexivity is defined as the introspective way that the researcher's own identity, positionality, and intersectionality shape the participant interactions and subsequent research. Acknowledging this poses transparency and integrity as essential components in the research methodology. In contrast to interpretive description or phenomenology, which were not selected for this thesis, qualitative description focuses more on the researcher's presence and decision-making done during coding and theme creation (Bradshaw, Atkinson, & Doody, 2017; Sandelowski, 2000).

Reflexivity is crucial in establishing credibility and trustworthiness (Sandelowski, 2010). Documenting the decision-making process and the evolution of interview questions and prompts, may help to legitimize the decisions made during the multiple rounds of coding and theme searching, reviewing, and categorization. Transparency in the analytic process also helps to rectify

the mechanical nature of the descriptive process by the pointed attention to how the researcher's involvement may still impact the description outcomes, regardless of how minimal. Incorporating reflexivity also acknowledges the researcher's role in the knowledge generation and dissemination process. Disclosure of my own positionality and potential influences enhances the coherence of this methodological approach (Sandelowski, 2010).

In this thesis project, my own experiences, educational background, professional identity, and prior knowledge of the topic will shape the interview guide, the follow-up questions being asked, as the level of description garnered from the participants. Throughout the data collection process, I implemented the following conditions:

1. Only one participant interview per day per researcher
2. If two participant interviews had to occur on the same day due to scheduling conflicts, the following day could not have two interviews
3. On days that a researcher had two interviews scheduled, they were scheduled with a minimum 4-hour break in between interviews
4. Check-ins with the thesis advisor would be done regularly
5. I would have regular check-ins with my mental health counsellor

I completed a reflexive memo after each participant interview, I conducted. For interviews that were conducted by my advisor, I competed a reflexive memo after listening to the interview recording. Each day that an interview occurred also ended with a journal entry documenting the interview experience and researcher notes. Examples of these items can be found in *Appendix E.* This concludes my data analysis chapter. The next chapter will discuss the final results from my thesis project.

5.0. Results

This chapter presents the findings from my qualitative research study that examined the psychological distress experienced by Manitoba respiratory therapists who performed terminal extubation during the COVID-19 pandemic. To illustrate the word frequency of terms used by Manitoba respiratory therapists, a word cloud was generated in NVivo v.15.3.0 (2025) for the top 50 terms, which included a minimum word length of 5, exclusion of stemmed words, and application of project stop words to remove filler words. This illustration is depicted in Figure 5.0.

5.1. Participant Demographics

Figure 5.0.: NVivo-generated word frequency query.

The participants included in this recruitment period had their interviews between April 2025 and June 2025, with interview lengths ranging between 25 min 51 sec, and 92 min 28 seconds. The average interview duration was 54 min 50 sec. At the conclusion of each interview, the interviewer (or lead interviewer when both were present), would also complete a reflexivity memo and journal a reflection entry to be included for analysis. This analysis would allow interviewers to share the non-verbal and physical reactions of the participants and identify any issues with the interview process that needed immediate correction (Skov, Østervang, Brabrand, Lassen, & Møller, 2024). The reflexivity memos were intended to ruminate on the physical display of emotion and visual cues given by the participant that may not be captured in the transcribed audio recording, while the journal reflection was to contemplate on thoughts and feelings of the experience from the perspective as a researcher and the emotions stemming from our own intersectionality that the interview would invoke (Skov, Østervang, Brabrand, Lassen, & Møller, 2024). No further member-checking was performed unless participants expressed a desire to

review the completed transcripts, and while this was offered to each participant at the conclusion of their interview, no participants have contacted the researchers thus far.

5.1.1. Manitoba Respiratory Therapists

A total of 10 interviews from respiratory therapists practicing in Manitoba, Canada were collected for final analysis, their relevant demographic information is indicated in Figure 5.1.1. Of the 10 participants, 7 of these participants identified as female and 3 identified as male when asked to state their gender identification. When asked to state their ages, 2 participants fell between the ages of 20-29, 6 participants fell between the ages of 30-39, and 2 participants were aged over 60 years. When asked to state the number of years they had been practicing as a respiratory therapist (up to the time of the interview), 4 participants had 0-9 years in the profession, 4 participants had 10-19 years in the profession, and 2 participants had 30+ years in the profession. When asked to state the primary population that they had performed terminal extubations on, 8 participants primary patient population were adults, and 2 participants primary patient population were neonates. When asked to state their equivalency of full time (EFT) working in the intensive care unit (ICU) during the COVID-19 pandemic, participants had a wide range of methods for describing the frequency and pattern of their work schedule. Therefore, in order to be able to organize these responses in a more understandable way for analysis, answers were consolidated and participants were placed into relevant categories based on their answers. With the understanding that the Manitoba Labor Code defines full time status as 20 12-hour shifts in a 6-week period, 5 participants had an EFT spent in the ICU equivalent to >80% of 1.0 EFT, 2 participants had >80% of 0.8 EFT in the ICU, 2 participants

Figure 5.1.1. Participant Demographics

Total Participants	**n=10**
Gender	
Female	7
Male	3
Ages	
20-29	2
30-39	6
40-49	0
50-59	0
60+	2
Years in Profession	
0-9	4
10-19	4
20-29	0
30+	2
Patient Population	
Adults	8
Neonates	2
EFT in ICU	
>80% of 1.0 EFT	5
>80% of 0.8 EFT	2
>80% of 0.6 EFT	2
<80% of 0.6 EFT	1

had >80% of 0.6 EFT in the ICU, and 1 participant had <80% of 0.6 EFT in the ICU. The full demographic listing of participants, listed as case classification, can be found in *Appendix D.*

5.1.2. Themes & Categories

These results are based on the data collected from the 10 virtual semi-structured interviews. I identified 9 categories and 4 overarching themes that have a progressive organization matching the course of the pandemic. The pattern of correspondence between these themes and categories against the timeline of the COVID-19 pandemic are depicted in Figure 5.1.2.

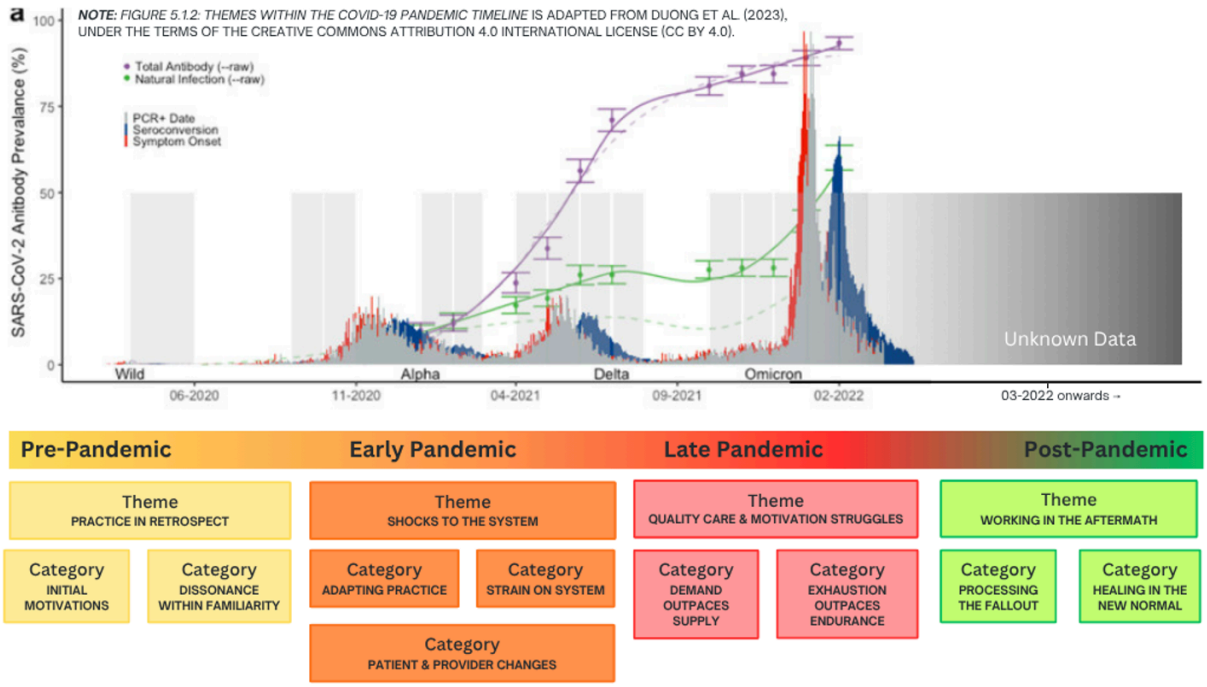
The first theme describes the retrospective perception that respiratory therapists had of their profession prior to the pandemic, to formulate a baseline of what their psychological health and outlook were. Within this theme are the categories of "initial motivations" and "dissonance within familiarity". The codes in these categories describe the inspiration for individuals to join the respiratory therapy field and what they perceive are the strengths and skills needed for a respiratory therapist to be proficient in their job. They also describe how they perceive the RT profession prior to, and in the early stages of the pandemic, which included responsibilities that were already distressing.

The second theme describes the initial effects of the pandemic's early stages, which may include up to the 3rd wave (SAR-CoV-2 delta variant) period. This theme describes the initial immediate effects to the healthcare system that resulted in drastic changes to clinical practice and the impact on the way RTs perceive their profession. Within this theme are the categories of "adapting practice", "patient and provider changes" and the "strain on the system". The codes in these categories describe the general pandemic experiences that RTs had during the emergence of COVID-19 transmission and beginning lockdown periods, as well as the consequential changes to experiences by patients, as perceived by RTs. These experiences maintain terminal extubation as a significant event, that is associated moral distress that arose from a change in the ability of RTs to perform their role to its fullest extent with the appropriate tools and equipment.

The third theme describes the strain on providing quality care and RT motivation as the pandemic progressed and resources were further limited during the 4th wave (SARS-CoV-2 omicron variant) period. Within this theme are the categories of "demand outpacing supply" and "exhaustion outpacing endurance". The codes in these categories describe the pandemic impacts on the workers and the subsequent emotional distress that arose out of feelings associated to helplessness and burnout, which resulted in terminal extubation being perceived as a task devoid of passion or motivation, rather than an exceptional event.

The fourth theme describes the state of the system and respiratory field nearing the end of the 4th wave and the post-pandemic period, including the lasting effects experienced by respiratory therapists who have remained in the profession. Within this theme are the categories of "processing the fallout" and "healing in the new normal'. The codes associated to these categories describe the coping mechanisms that respiratory therapists utilized that enabled them to continue working, as well as the supports and services they sought and desired. Respiratory therapists also described changes to their personal and professional identity, and the impact it has on how they currently operate and process emotions and feelings in current times. The following subsections will discuss each theme identified and the emerging categories within each theme, including notable quotes from participants that describe the data communicated in the interviews.

Figure 5.1.2. Themes within the COVID-19 pandemic timeline.



5.2. Theme 1: Practice in Retrospect (Pre-Pandemic)

During the semi-structured interviews, participants were asked what initially drew them to the respiratory therapy profession and what they perceived as their roles and responsibilities in conducting terminal extubations on patients. This theme collected the experiences shared during this time, which describes a working environment with standardized protocols and processes that respiratory therapists were familiar with. While the workload was still tough, it was in retrospect, manageable and expected as a normal part of the job at the time. Respiratory therapists reported a high level of autonomy and the ability to offer their opinions regarding airway management and mechanical ventilation for the patient. Terminal extubations were being done, but occurred less often and mostly, allowed the time and patience required to ensure the patient, family, and healthcare team were fully ready. During these situations, interdisciplinary team debriefs were offered but not routinely attended by respiratory therapists who were invited but oftentimes found that they were unavailable due to attending to the needs of other patients.

5.2.1. Category: Initial Motivations

Analysis of the interview data revealed the personal characteristics and motivations that participants associated with entering and succeeding in respiratory therapy. Participants were asked what initially drew them to the field and what they perceived as their role and responsibility in conducting terminal extubations prior to the pandemic, particularly reflecting on the factors that led to the discovery of the occupation and important considerations for individuals that are considering this career path. Many participants described having thrill-seeking personalities and an affinity for adventure and fast-paced work environments, adding that they either found the profession by accident, or had family members in either respiratory therapy, or a related healthcare field. By discussing their own pathways on this journey, descriptions of personal attributes that support the decision to continue work in this profession. Participants shared:

> *"I found it by accident, and the description [of the career] sounded enticing! It seemed every interesting and fun, and I really liked the fluidity it had." – Evelyn*

> *"Family member was a respiratory therapist, and I followed in their footsteps." - Daniel*

Participants also shared what they thought were skills that individuals needed, to become a respiratory therapist, which included traits such as working well with others, being able to think on your feet, and acting quickly in situations. Furthermore, having a strong emotional intelligence (reading the room), was also noted as an essential skill. However, a notable motif became apparent in the skills that participants recommended for prospective RTs. Descriptions such as "resiliency" (*Irene*), "being able to thrive in high-stress environments" (*Daniel*), and even "detachment" (*Frank*) showcases the impact of the COVID-19 pandemic. Participants share these sentiments almost as a cautious consideration, or a warning, of what they felt was vital to endure the hardships they had faced. Common descriptions included:

You need to be definitely compassionate, you need to be aware, right, you need to be able to sort of react, or think fast, you know, you need to be able to almost like "read a room" so to speak, because there's sometimes where there's so much emotion going on." -Anne

"You have to be able to emotionally regulate yourself and be emotionally stable and then be able to prioritize [and] multitask." -Brooke

"I think you have to be adaptable, you have to be flexible, you have to be willing to move from thing, to thing, to thing." -Carly

"They really have to be able to think on their feet, act quickly, [and] work well with others." - Evelyn

"Being able to think quickly and calmly in pretty high-stress situations." - Frank

"You have to be very agile, not that that's the main crux of it, but that to me is one of the most important things about being a respiratory therapist." -Grace

"I think communication is very important. Like, proper time management or prioritisation skills are very important. Independence is very important, and adaptability." -Henry

"Compassion [and] teamwork" -June

Despite the differences in individual backgrounds, age, length of practice and gender, notable commonalities emerged across participants responses. Collectively, these reflections showcase a shared understanding among respiratory therapists of the core qualities and motivations that align with both the demands and the rewards of the profession. Subsequent categories within this theme explore these recurring perspectives in different contexts.

5.2.2. Category: Dissonance Within Familiarity

All participants displayed sound knowledge about their role in the terminal extubation process prior to the COVID-19 pandemic. The main role of RT was to safely and appropriately manage patient's airway along at ensuring mechanical ventilation was appropriately delivered. Part of that role was to communicate to the care team, the respiratory status of the patient, and suggest various strategies to care, which also included terminal extubation. Communication was mainly done at the care team level and rarely included family discussions. Furthermore, their role was mainly consultative rather than decisive:

> *"We're not involved at all. We're managing the ventilator. Decisions are a part of a hierarchy with physicians at the top." – Daniel*

> *"We're just available for when the decision is made providing support for the family through the process of discontinuation." - Henry*

Therefore, all participants communicated that they felt confident in voicing their ideas and providing feedback to the interdisciplinary team, about care planning and the ventilator. This meant

that they held no reservations about providing suggestions regarding exploring options or alternatives if they felt that it was clinically appropriate to do so:

> *"I'm not in charge. I'm a caregiver at the bedside, but I'll communicate my concerns to the physician if I have them." -Grace*

These sentiments matched other discussions surrounding their personal philosophies about mechanical ventilation and their beliefs on how terminal extubation should be. Unfortunately, this ideal was not always reached and participants shared that there were situations where ventilation was prolonged.

> *"We don't practice terminal extubation enough [because] those difficult conversations are never made in time." -Brooke*

> *"Respect the patient's wishes but know when there is nothing that can be done." -Anne*

Respiratory therapists identified that one factor that is at the root of some of the confusion seen with family, was the lack of early effective communication between the care team, the family and patients. Participants noted that when these discussions regarding goals of care or code status are not always clearly discussed and properly documented at the start of admission, this often leads to uncertainty and miscommunication. As a result, therapists shared that delayed or unclear advanced

care directives complicates decision-making events where rapid clinical deterioration is required to guide intervention.

Prior to discussing the events that happened during the COVID-19 pandemic, participants recognized that the nature of terminal extubation, and aspects of the respiratory therapy practice, were rooted in moral situations and emotional burdens that were already known to be difficult. When asked to describe a situation regarding terminal extubation that was particularly distressful, in their careers, respiratory therapists opted to share stories of patients they encountered in a time predating the entirety of the coronavirus pandemic. When asked to share an experience with terminal extubation that they felt particularly morally or emotionally affected by, stories emerged such as:

> *"I had a middle-aged [patient], and they had their whole family around, like their spouse, their kids, and everyone was just sharing what they had still wanted to do with this person, and it really made me think… oh, this person had a lot to look forward to still." -Evelyn*

> *"We've had situations where we had to terminally extubate younger people after self-harm and things like that, so it was kind of similar… like we had a patient in her 40s who had committed suicide and she was on the ventilator for a while. This was before COVID-19, but kind of similar to that situation, she had young kids and the kids were there and they were talking about how her MI was done and she was not going to recover." -Brooke*

> *"I remember a circumstance – it was my first with the family in the room and recognizing that the family is not [working] in healthcare and the turning-off event was the sign for the family.*

> *And I remember them just like wailing and throwing themselves on the patient, and they were still alive. So, it's just recognizing what we are doing and what we know is that they're not usually passing right away. Or sometimes they [do], but in that circumstance, the patient was still… I think lived another couple of hours, but that was just the [ventilator] being turned off, and then the wailing of the family was… yeah, pretty hard." -Irene*

Terminal extubation was not without emotional weight even prior to the COVID-19 pandemic, and respiratory therapists often recalled cases that stayed with them. While they generally described feeling confident and autonomous in their clinical role during this pre-pandemic period, the act of withdrawing life-sustaining ventilation still required significant emotional labour. When decisions would not align with personal values or moral intuitions, the process of facilitating a patient's final moments could be deeply troubling. The emotional demands associated with terminal extubation predated the COVID-related pressures of providing care. The pandemic did not create this difficulty so much as intensify and compound an already challenging aspect of respiratory therapy practice. This category, at its core, highlights how participants routinely encounter ethical and moral tensions embedded within their everyday practice. While these experiences were often familiar and taken for granted, respiratory therapists described an underlying expectation of discomfort or conflict shaped how they engaged with patients and with themselves in their professional roles. Their involvement is the process of terminal extubation prior to the pandemic was often circumscribed, with limited participation in earlier discussions such as family meetings and greater responsibility during the final act itself. Rather than serving as a protective factor, this positioning may have contributed to a sense of disconnection or lack of preparedness, as therapists were required to carry out emotionally significant interventions without being fully included in the preceding decision-making process. In this pre-pandemic context, these tensions were not necessarily disruptive but existed as part of the professional life that in hindsight, was taken for granted. As the

pandemic progressed, the discord between perceived roles and the realities of practice intensified, these underlying tensions were amplified to a point where they became difficult for RTs to manage, leading some to realize the limitations of their capacity to endure.

5.3. Theme 2: Shocks to the System (Early Pandemic)

During the early and mid-stages of the pandemic, the impact on the healthcare system became apparent as every care level began to show signs of strain (Duong, et al., 2023; Turner, Smith, & Jones, 2024). Up to the delta wave variant, significant disruptions in clinical operations, supply chain management, and staffing levels caused rapid operational changes that impacted the respiratory therapy practice and the ability for healthcare workers to effectively do their jobs. The qualitative descriptions encompassing this theme involved communication barriers and limited resources for frontline workers (Duong, et al., 2023; Turner, Smith, & Jones, 2024). The experiences shared in our interviews describe the changes to not just the respiratory therapy practice, but to their role in terminal extubation and associated decision-making. Participants shared accounts such as:

> *"Your practice changed because you were pulled in so many directions, and you just have to learn how to time manage and prioritize where the highest need to be is." -Irene*

> *"I feel like sometimes the decisions were made quicker, because there were more beds we needed… if it wasn't pandemic time, or the turnover for patients was so fast that like, the decisions were made a little bit faster during COVID than normal." – Brooke*

The critical nature of the COVID-19 pandemic caused increased uncertainty, stress, and workload demands that impacted the experiences of patients and family members, which did not go

unnoticed by respiratory therapists. Subsequent categories highlight the emergence of terminal extubation being perceived as an obligatory task, rather than an emotional event, and the moral distress that arose as a response to the loss of humanity in these interactions.

5.3.1. Category: Patient and Provider Changes

A notable theme common among respiratory therapists was witnessing the impacts of the pandemic on the patient's experience as they navigated the healthcare system. Participants would describe how the change in policies regarding public visitation negatively impacted patients and family members.

> *"Families are unable to be with the patients unless it was through an iPad." -Carly*
>
> *"Patients were dying alone because family was not allowed in the room." -Brooke*

Furthermore, the suffering experienced by patients and the frustrations with the barriers caused by restrictions on visitation and communication, weighed heavily on respiratory therapists. Participants described the change in public access to hospital facilities as the pandemic progressed, from a limited number of visitors (e.g. 1-2 per patient) to no visitors. This led to difficult situations where family members were prevented from being physically present and therefore, the emotional burden of providing support and comfort to the patient, was placed on hospital staff.

> *"It's hard to get a hold of family, to find the power of attorney, or someone to make a decision." ... "There were families that were furious and in complete denial." - Anne*

"Parents couldn't be in the ICU, so staff had to play that role." -Brooke

Respiratory therapists also found that the hospital's processes and procedures changed the nature of care progression entirely. They described how new protocols were enacted to treat the acuity of the patient's disease progression, but this often involved increases in intensive workload tasks that departments did not have the staff for. They reported feeling as though the care they were providing was being transformed into a more automated, mechanical practice devoid of any humanity and empathy. Participants shared:

"[Care had] quicker movement from first intubation attempt, to LMA, to cricothyrotomy." …
"It's just constant back-to-back patients. Just intubate, central line, arterial line, next patient - then repeat." -Irene

The flow of the continuum of care was disrupted, and participants described how the frequent changes in hospital policy and care procedures caused a disconnect between the individual and the respiratory therapy practice. Taking on new roles and responsibilities as a response to adapting to the challenges of the COVID-19 would prove difficult as the pandemic progressed.

5.3.2. Category: Adapting Practice

Significant among these were the changes to how respiratory therapists conducted their day-to-day practice in ways that differed greatly from what their normal expectations were. Participants described experiencing the redeployment of RTs from community or non-critical care settings into their short-staffed intensive care unit to address the massive increase in patient population. This was a unique event directly related to the effects of the pandemic that no

participant had ever experienced before. Simultaneously, RTs that were already working in critical care found their role deepened in tasks that they were already doing.

> *"[RTs] took on more of a leadership role during the pandemic – sedation, weaning, and ventilation strategies." – Henry*

> *"You'd get in in the morning, you'd hit the ground running, and you'd run for 12 hours straight, from one thing to the next thing, and people within the system – and nurses, doctors, getting angry with you because you weren't there when you needed to be there, it's because you had to prioritize between one person dying versus another person dying." -Grace*

> *"I feel like sometimes the decisions were made quicker, because there were more beds we needed… if it wasn't pandemic time, or the turnover for patients was so fast that like, the decisions were made a little bit faster during COVID than normal." -Brooke*

Their descriptions of these events paint a picture of efficiency born from scarcity of time and resources, rather than from a motivation to improve effectivity and productiveness. Some respiratory therapists found that their capacities in decision-making became muddled with uncertain around patients that fell between categories of care directives.

> *"Patients that came from home, or a nursing home – the direction wasn't clear." -Anne*

"Patient wishes, family wishes, sometimes you go against those, it's usually the physician leading that decision." -Irene

The frequency of these situations compounded with the loss of autonomy and confidence caused an already morally and emotionally difficult task to become unbearable. As time went on, and the system was further overloaded, respiratory therapists describe a separation in psyche that separated their human emotions from their professional duties.

5.3.3. Category: Strain on System

As the rates of transmission increased with each infection wave, the implementation of public health policies and general lockdown began to take a toll on healthcare workers that remained working in the system. Respiratory therapists shared their difficulties in working with consistent communication, inadequate support, and workload stress that changed the practical realities of delivering care.

"The disease, the way it went – the way it presented and how people were dying. The pandemic was different than the single sort of reasoning for extubation." -Anne

"Extubations were strange when you have the family crying on an iPad when they couldn't come in. [Do] you want me to turn the iPad away while I take the breathing tube out?" -Frank

"I did the [extubation] and sat there until the baby had passed away, and it took a couple of hours – during that time, [the nurse and I] talked about our own children, our own fears surrounding COVID, and how terrible the situation was." -Grace

The institutional responses and frontline experiences by respiratory therapists became deeply interconnected to these distinctive, extraordinary situations they had never encountered before. Their capacity for ongoing resilience and adaptability was beginning to wane and increased moral distress set into their daily work lives. There was a narrative of helplessness adopted into the perspective of operating within the restrictions and limitations of the pandemic, and how the lack of flexibility had a particularly significant impact on the personal connection to the profession. The participants shared:

"The amount of policy changes that were coming every week, every two days, that was stressful because they were telling us to reuse our N95s and we had to get them signed out." … "There was a sense of desperation for the family to be with their loved one, denying them was morally distressing." -Irene

"Nothing was familiar during the pandemic; there has to be some level of adaptability. First policy, then practice, not the most efficient, and that went against my beliefs." -Henry

"I wouldn't call it a guilt, but almost like a shame of our system [that we can't make an exception], like how impossible that this – like what is that doing to them? You know, like they had a child that they were never able to hold." – Grace

The profound strain experienced by respiratory therapists during the COVID-19 pandemic arose from frequent untreated moral distress stemming from situations where they were unable to provide the level of care they were accustomed to. While much of the discussion surrounding the COVID-19 pandemic focuses on this system strain, participants also emphasized the strain on individual-level. Beyond the institutional level impacts, respiratory therapists described how these systemic challenges were translated into a strain of their own well-being. Healthcare system strain at the macrolevel was internalized by these frontline providers which influenced how they experienced their work and their connection to the profession beyond the hospital system. Participants described how their experiences during this time involved notable feelings of guilt and shame, especially in instances where, even contextually positive pandemic-related experiences generated feelings of self-blame. Some experiences that were shared:

> *"I felt a lot of guilt during the pandemic. I was leaving the house regularly; I wasn't struggling financially and had great job security. I know a lot of people that were laid off." ... "People are looking for comfort, and they reach out to folks who deal with [COVID] for comfort, but I definitely had some guilt as well." -Henry*

> *"Where my morals always compromised is judgement, like I mean COVID was hard enough, and people have a right to their decision, so when you go to work and you know, somebody's really sick and they're dying, and you hear people say things like, 'Oh well, they should've gotten vaccinated.' That causes me moral distress because it's a judgement." … "I don't think putting more judgement on somebody, or a family, is the right thing to do." -Anne*

"I was isolated from the discussion with the families. You could tell there were families who were very – they would always be sad, but a lot of them were furious. The majority of our COVID patients were unvaccinated, and a lot of their family members were in complete denial about any of this. We were 'killing them' with our treatments. The ventilator is what kills COVID! If we didn't put them on a ventilator…" -Frank

"I was pretty well versed in all the conspiracy theories… which was good because I was discussing a lot of stuff on rounds because they're asking about this horse de-wormer. Why do they want us to give Ivermectin?" – Frank

All participants told stories of situations where they felt a personal responsibility for patient suffering and circumstances that were out of their control. This would erode their work efficacy and job satisfaction, placing an existential burden on an already exhausted profession. One respiratory therapist shared their mentality during their worst work experience during the pandemic:

"I can't go to the bathroom. I can't eat. I can't drink. I have this mask shoved on my face. My skin is breaking down. I'm exhausted. My patients are dying. I can't help them." -June

5.4. Theme 3: Quality Care and Motivation Struggles (Late Pandemic)

During the last Omicron infection wave, the struggle to maintain both quality of care and the motivation to continue working became a central theme reported by the study participants, as they discussed the prolonged demands of the pandemic. Respiratory therapists described how the normalization of ethically difficult situations and urgent conditions began to alter their ability to emotionally connect to their job. While crisis levels seemed to endlessly reach new heights, the rate

of damage in the healthcare system began to supersede the efforts that pandemic measures were meant to fix.

5.4.1. Category: Demand Outpaces Supply

The first emerging category that was notable in this data these was the COVID-19 impacts on participants, as they shared that they found their workplaces had a "lack of adaptability" and "lack of transparency regarding what we should be doing versus what is more comfortable to do." It could be conceptualized that the demand for clarity among the workers outpaced the supply of direction that employers could provide at the time. This pattern of demand exceeding the supply was represented in the data in so many ways. Inhabiting many different levels of understanding.

The sheer volume of critically ill patients being treated meant an increase in the frequency of terminal extubation events. The demand for respiratory therapists' time and expertise began to outpace the supply they were able to offer. This was especially significant when participants would share experiences regarding the "many policy changes around how to keep people safe." The once clinically significant, and sensitively managed milestone of terminal extubation suddenly became heavily routinized, almost menial task that only required completion to keep up with RT workloads. Respiratory therapists described their response to this change crating a sense of detachment and compartmentalization. Many shared sentiments of terminal extubation feeling almost *easier* because of its repetitiveness.

> *"[Terminal extubation] just became a little more... I don't know, because I don't want to use the word 'routine' but... it would be similar to routine because it happens more often, you become more familiar with it." -Anne*

"When it's time to do the task, it's just – I mean, you're there to do the task, just get it done as respectfully and responsibly as possible... anything after post-pandemic, it was just becoming routine, it became a lot easier because of it." -Daniel

"I feel like a huge emotional part of this was that you get good at separating in your mind, like you get good at compartmentalizing the deaths that happen at work... you justify it somehow in your head or you're numb to it because you have to. Like, how do you get through your day?" -Carly

The concept of demand outpacing supply no longer just applied to physical equipment and resources, but to human capacities of patience, understanding, and empathy. This experience was particularly poignant with respiratory therapists that were describing their interactions with the COVID-19 disease as it permeated the boundaries of their job and bled over into their interactions with their own community. One participant shared:

"I think working and seeing what I saw on the frontline and then coming home to a community that was not abiding by the rules and kind of just rolling their eyes about it all – I definitely had a lot of frustrations and anger." -June

The progression of the COVID-19 pandemic, especially as we consider this theme to be encroaching upon the final transmission wave, left the system unable to rectify the mismatch between demand and supply. As this imbalance became greater, the overall exhaustion each component in the system, from patient, to worker, to system, overcame any endurance that may have remained.

5.4.2. Category: Exhaustion Outpaces Endurance

Feelings of detachment, reduced job satisfaction, and concern about declining standards of care consistently pushed respiratory therapists to the edge of what they could endure. Participants shared how workplace distress did not remain confined to the job, and many described how emotional exhaustion, intrusive thoughts, and emotional withdrawal permeated their personal lives, straining relationships and diminishing their overall well-being. Some found they were unable to physically function or take of themselves after particularly difficult hospital shifts, while others vowed never to work under pandemic conditions again in the future. Participants shared:

> *"I could never go back to that level of adrenaline." -Irene*

> *"I feel like I was in fight-or-flight during the pandemic, so [after a shift] I would sit in my car in the parking lot and I couldn't drive home." -Henry*

Within this category and theme, we encounter what is possibly the most sensitive of conversations encountered in data analysis. During these interviews, participants shared stories of their worst extubation situations, or experiences with patients that was the most impactful – describing events that they still carried within them. This emotional weight compelled them to act outside of normal expectations. In several accounts, respiratory therapists took personal initiative when institutional restrictions prevented families from being present at end-of-life care. Some participants described how they facilitated final moments of connection, such as discreetly allowing parents of a critically ill newborn to come to the ICU and hold their child for the first time or transporting a patient outside the ICU to allow their family members a chance to say goodbye for the last time. These

actions should not be framed in defiance, but instead, as responses to profound moral discomfort. Many participants described the blind adherence to restrictions feeling incompatible with their professional and personal responsibilities. This prompted them to intervene in ways that prioritized compassion despite the risks involved. One participant shared this story:

> *"There was [a patient] who had COVID and he was deemed a one-way extubation - he was still awake and alert, but he had a ton of other complex medical issues that made him not a candidate [for cardiac surgery]. And so, the plan was that we were going to extubate him, and then he was going to pass, and then they weren't going to let the family in because the family wasn't vaccinated and they weren't willing to wear N95s. So, we actually took this man outside, in his hospital bed, on the ventilator – we didn't extubate him outside [and] at the front entrance of [the hospital]. We literally had this whole plan; we were in hazmat suits. and I had the whole ventilator bagged, and we brought him outside so that his family could come see him, physically see him because they weren't allowed in the hospital. So, they said their goodbyes, and then we brought him back upstairs, and then we extubated him upstairs. And then they could, [see him afterwards] on Zoom or Facetime, but I just remember it just being the most ridiculous thing." -Carly*

This eventually culminated in a realization that strict adherence to institutional policies did not align with their own core beliefs and values. Respiratory therapists had a growing recognition that extenuating circumstances required creative solutions, and these instances were necessary in preserving the dignity of the patient, but also their own moral integrity. Small acts of compassion was a way to reconcile the differences between their professional commitment to care and institutional expectations.

"I think you sort of started to feel, or I started to feel a bit like, "Wow, we really are on our own." Like, you have to take care of yourself, and you have to take care of your own, and following the rules isn't going to get you anywhere. [Rules] are rules, but at a certain point we have to like, have confidence that we had to make the best decisions for ourselves. And even if that means I have to break a rule here or there, it's if my core value is that a mother should be with her child – I don't care what the rules are." -Carly

Though previous themes discussed feelings of shame or guilt, a new understanding of these emotions arose in the context of the late pandemic time period. These new experiences of guilt held a particularly dark shadow of helplessness, as respiratory therapists were unable to endure the excruciating levels of exhaustion. Descriptions of these experiences began to sound astoundingly hard, especially as it was clear that the resilience of respiratory therapists had waned. When speaking about guilt, participants said:

"I held a lot of guilt when things wouldn't work, like when people would die, when nothing would work, when no one was getting extubation because they were getting better, only because they were dying." -Henry

"It was stressful, it just seemed like we were helpless, no matter what we did everything was falling apart, everyone was falling apart. Not being able to give everyone the time that they needed, we were just all over the place." -Brooke

To sustain their ability to work under these conditions, RTs described developing personal coping mechanisms that helped them to function despite exhaustion and mental fatigue. While these strategies enabled continued performance, they also underestimated the damage it was doing on workers' mental health and overall distress. Many respiratory therapists shared that they had begun drinking more on their days off as a way to cope with the emotions they felt. Substance use as a way to self-medicate was one of the notable methods employed by participants in order to destress after work and return, but many of them also shared practices they did in the workplace to get through the day.

> *"I remember walking back to the department and being in a kid of silence. I have learned over the years to talk about things more, because I think that helps with the processing of things," -Irene*

> *"It helps to discuss things with coworkers, the things that we were going through. We were always like – just to process things and we had everyone else that was going through the same things, just discussing our experiences and our feelings, that helped. Just to get away from the situation – get away from our ICU that we were in all the time." -Brooke*

> *"I was coping, coping, coping. I was going to the gym on my lunch breaks... and then as soon as I got that break, I was like, 'I can't cope with anything anymore.' So, nothing was working." -Irene*

As a reflexive note, a common experience arose among participants that described differing opinions on whether RTs were prioritized during the pandemic, whether in relation to acquiring

PPE and equipment, or ensuring adequate staffing and supports. Many interviewees described feeling as though they were not prioritized at the beginning of the pandemic, but only through the progression of time and seeing the importance RTs had on patient care, did this narrative begin to change.

> *""I would say that, at the beginning – no [RT was not a priority]! As we moved further along, then yes! But yeah, at the beginning, just the example of being denied an N95 when I'm at the head of the bed during an intubation, it's something that I'll never forget." – Henry*

> *"No, especially not in the beginning. Even though they realized that RTs are there, and maybe not in the beginning as much because, like I said, they wouldn't give us access to certain resources, or they would think that, only one of us are needed because they don't know the workload that we are dealing with…" – Brooke*

During the pandemic, the practice of healthcare recognition was common in society as a way to encourage frontline workers to continue in their roles. While this practice was an attempt to fix the exhaustion and strain that respiratory therapists felt, many of them shared that these sentiments felt disingenuous based on how quickly RTs were forgotten immediately following the pandemic. Participants described a sense of false appreciation, only given to RTs to placate their complaints, which were particularly unanswered when it came for collective bargaining.

> *"For a minute there, the media is talking about it and highlighting RTs, but like anything, it has its little moment and then it blows over, and then you're forgotten about and you just go back*

to doing your thing." … "You get all this praise during COVID, then there's negotiating talks that come from wage increases, and all the allied health gets forgotten about." -Daniel

The stark contrast between the public praise RTs had described experiencing during the pandemic, to the abrupt withdrawal that came with the politicization of public health measures, amplified the feelings of distress and burnout. Many shared how social media and news outlets were quick to brand healthcare workers as "heroes" only to have this acknowledgement withdrawn once the public became frustrated with the ongoing lockdown limitations. Participants described how the sense of visibility and appreciation initially helped to maintain morale in their intensive working conditions, but how those sentiments transformed into something that felt conditional and superficial. The "hero" rhetoric almost felt used against them, especially once public attention shifted elsewhere. Their stories of undervaluation and societal entitlement brought feelings of disillusionment, and respiratory therapist sacrifices, both personal and professional, were regarded as merely an expectation of the job.

5.5. Theme 4: Working in the Aftermath (Post-Pandemic)

The Manitoban RTs who participated in this study have notably all stayed in the profession and remained working within the system to some capacity. Some have plans to remain where they are, while others have switched to different departments within the field, however all are still employed as RTs. Following the end of the 4th transmission wave, pandemic-related practice changes were generally scaled back as patient numbers began to decrease, and the healthcare system attempted to return to pre-pandemic norms. Participants described a time of introspection with their relationship to the respiratory therapist profession and acknowledging that while the system was working to return "back to normal" there were aspects of the job that could never be the same.

5.5.1. Category: Processing the Fallout

Respiratory therapists described a profound and noticeable change felt within themselves as they continued to work after the COVID-19 pandemic. Many talks about how certain changes to their practice remained and would probably remain, for the rest of their career. Changes such as firmer professional boundaries, redefining personal limits, and contingency career plans should another pandemic happen, were among the common ways that RT reference points were influenced in response to what they experienced. This may not have been a full recovery and processing of the distress they felt, but a pragmatic attempt to rationalize within themselves, a reason to continue working not just in respiratory therapy, but for healthcare in general as they carried the weight of COVID-19 impacts moving forward. One participant shared:

> *"I think that sometimes, when things start becoming more and more, we do get a little more desensitized, so I do think there was some desensitization during COVID." -Anne*

> *"Like did you see 10 people die today? I'm trying to catch myself because we chose… like I chose this career, right? [But] I didn't choose a pandemic and to see all of that." -Irene*

The pandemic had repercussions on the personal and professional identities of frontline respiratory therapists, as they reflected on the blurring of this boundary. Participants described how the post-pandemic period sparked a reshaping of how they understood themselves, both as clinicians and as individuals in society. Many shared how a more complicated relationship now replaced their previous identities prior to the pandemic; one that held more realism and a more cautious approach to self-sacrifice. Participants shared how this change extended beyond their emotional responses to

clinical work and had ramifications right down to their most intimate perceptions. The shift in the threshold for stress and distress was recalibrated from the pandemic, so while the profession always carried an inherent baseline of emotional strain, what didn't return was their "normal" emotional reaction to it. Some RT reflections on terminal extubation no longer elicited the same emotional response as before, suggesting a shift in empathy, whether in its reactive trigger or in its engagement capacity. This shift also influenced how participants spoke about their profession to others, which began to include the personal costs that came with the expectations and altruism of the work. One participant shared:

> *"There were a lot of social and personal stressors. I felt like there was a higher responsibility from me, a lot of people came to me asking about the vaccines, how infections work, when to call 911." … "The way I talk about healthcare is a little bit more human, and a little bit more patient-centered, it's not as adrenaline-filled and the 'cool' things that we see, but more humanistic. I took more of an advocate role when I talked about my profession and my identity within the profession." -Henry*

> *"I think that our practice grew, our confidence grew, because we were operating at a greater scope. I saw [respiratory therapists] become more confident in their decisions and often in their abilities to handle a situation. They became leaders." -Grace*

Participants described how their duty as a respiratory therapist became all-encompassing, and as a result, altered the way they communicated and carried themselves in everyday life. Lesser shared was the impact on the friendships and familial relationships that RTs experienced as they

discovered the difference in beliefs others in their lives held. This occurred mostly in regard to the widespread availability of vaccines as it rolled out to the general public. It was apparent that though some participants experienced hardship in trying to educate others in their lives, they may not have been as open to sharing this and therefore the matter was not pressed further.

5.5.2. Category: Healing in the New Normal

Participants also discussed the ways they felt supported and encouraged during the pandemic and in the period afterwards. Many shared how they noted services aimed at mental health and well-being initiatives set up to promote personal safety. Some acknowledged that even being a part of the debriefing helped feel included. Respiratory therapists described the coordinated efforts by their hospital facility to offer counselling services, spiritual care, and other mental health supports that were meant to help staff cope with the psychological demands of the pandemic. While participants acknowledged that they were aware of these services, their perceptions varied on the accessibility and effectiveness of these efforts, citing barriers such as time constraints, stigma, or emotional exhaustion as reasons they did not participate. However, these and other kind gestures from local businesses, provided an opportunity for RTs to gain some closure from these difficult situations, sharing:

> *"We're directly involved and we experience it all too, so being involved in the debrief helps." - June*

> *"The hospital in general, and this is where I give them credit, there was also some very, very generous and kind people out there as well that – you know, you go to work and somebody might have sponsored lunches for that day. Or you go to work and somebody once sponsored*

ice cream for everybody that day." … "[The hospital] once a year [has] some sort of recognition thing, like for patients that have died. So, I think ... that's something that you can attend and to help also for closure." -Anne

An incredible theme shared among many participants was the realization that the support of their fellow RTs became a crucial source of support for not just the day-to-day challenges, but the pandemic in its entirety. Coming together as a team, sharing in the emotions and difficulties of the job, helped to develop a way to deal with the situation rooted in humor. Participants described such experiences:

"It was camaraderie I think is the big one and just being part of a group that really supports one another. [It's] like soldiers coming back from war. They can't really talk about it with other people. They don't talk about what happened very much. You can kind of try and explain some of the stuff to people, but it's just… our sense of humour…" -Frank

"[It's a] great coping mechanism, like I have a great team at work and we're able to sort of lift each other up. I think – I guess one of the important things about being able to work in this profession is that you kind of have to have a dark sense of humor." -Evelyn

The extraordinary strain placed on respiratory therapists during the pandemic cannot be underscored, as the need for physical and psychological protection is essential in dealing with the aftermath of COVID-19. Participants shared how the pandemic changed their overall outlook and their personal philosophies on life. Their descriptions of how they now approached their profession with more purposeful advocacy and safety, especially to ensure there would be no repeat of the conditions they were forced to work under during the pandemic. Respiratory therapists shared:

"The number of times that we've seen people saying goodbye too early, or having regrets, I've learned to live my life without regrets." -Grace

"I definitely became more of an advocate of the profession, especially seeing people firsthand, we all saw a different demographic of sick people, especially in the last few waves." … "Just from those experiences and seeing what happens when you're not vaccinated, and seeing what happens when you're not following public health orders, I became an advocate for people taking care of themselves and getting vaccinated." -Henry

The Manitoban respiratory therapists interviewed in this project volunteered their time and experiences towards our study to transform their events into opportunities for resilience and revised purpose. The amount of appreciation for these individuals cannot be understated, as it involved placing themselves in a state of vulnerability and possibly, reliving their trauma – all to contribute to our research goals and objectives. Participants spoke of how the sharing of their stories could lead to meaningful improvements in system preparedness, worker supports and more organized healthcare responses to any future pandemics. More importantly, respiratory therapists described how they felt as though these interviews provided a sense of release, a cathartic opportunity to bid farewell to that chapter in their lives. By ensuring that their profession is better understood and valued moving forward, the hope is that this improves recognition, recruitment, and retention not just for RTs, but for healthcare workers worldwide. This concludes the results chapter of this thesis.

6.0. Discussion

This chapter will discuss the results that were presented in the previous section and compare them to the literature review in terms of the patterns and key themes that were identified among healthcare workers and the distress they experienced during the COVID-19 pandemic. The purpose of this master's thesis is to employ a qualitative approach to explore how respiratory therapists perceived and experienced the process of terminal extubation and ventilator withdrawal during the COVID-19 pandemic, and whether these experiences were associated with psychological distress. This study sought to understand how respiratory therapists managed these events and to identify patterns in their self-reported impacts stemming from their involvement in end-of-life care during this period.

As discussed in Chapter 3, My study pertains specifically to the respiratory therapists from Manitoba, Canada that were interviewed as part of this project. To recall, my thesis project has three objectives:

1) Describe how Manitoba respiratory therapists perceive their role and responsibilities during terminal extubation,
2) Describe the impact of enacting ventilatory support withdrawal measures on Manitoba respiratory therapists' practice, and
3) Describe how the COVID-19 pandemic changed the experiences of terminal extubation and ventilator withdrawal for Manitoba respiratory therapists.

I will be discussing the findings from each theme that address these objectives, previously explained in Chapter 3.

6.1. Objective 1

The first objective of this thesis seeks to describe how Manitoba respiratory therapists perceive their role and responsibilities during terminal extubation. Participants' accounts revealed that these perceptions were shaped not only by professional expectations, but also by evolving

clinical and systemic conditions over time. Prior to the COVID-19 pandemic, respiratory therapists generally described their role with a sense of clarity, stability, and professional confidence. Their perceptions were grounded in both technical expertise and an implicit understanding of the emotional and relational dimensions of end-of-life care. However, despite this apparent clarity, participants' narratives also highlighted structural and interdisciplinary factors that shaped, and at times constrained, how their roles were enacted in practice.

Although the interviews were conducted after the COVID-19 pandemic, interviewees were asked to reflect retrospectively on their pre-pandemic experiences. These reflections provide an important baseline for understanding how respiratory therapists understood their professional responsibilities before the disruptions of the pandemic. To reflect these descriptions, the discussion of this objective is centered around the first theme: *Practice in Retrospect,* which captures the significance in role perception. Three key aspects of pre-pandemic role definitions emerged from the first theme identified in the data: the technical and procedural nature of the role, the emotional and relational expectations of care, and the structural limitations surrounding professional involvement with decision-making.

6.1.1. Expertise and Responsibility

The interview questions asked participants to describe their understanding of their role in terminal extubation and ventilator withdrawal, but technically, these accounts are retrospective in nature, as our interviews were conducted after the COVID-19 pandemic. Their descriptions were ones of clear and stable understandings on their reflection of their practice. Respiratory therapists consistently identified themselves as primarily responsible for the technical execution of ventilator withdrawal, including preparing the patient, managing ventilator settings, and ensuring physiological stability throughout the process. Participants consistently identified themselves as primarily responsible for the technical execution of terminal extubation and ventilator withdrawal. This included preparing the patient, adjusting ventilator settings, monitoring physiological

responses, and physically removing the endotracheal tube when appropriate. These technical responsibilities were described with a high degree of confidence and competence, reflecting both specialized education and clinical experience. Participants often framed this aspect of their role as clearly defined and professionally autonomous, suggesting that technical expertise formed a central component of their professional identity.

The physical act of removing the endotracheal tube was one aspect of this journey, but not necessarily one that was highlighted as the most crucially sensitive (Cullum, Madani, Cutler, & Reavis, 2022; Cottereau, et al., 2016). This aspect of their role was often described with a high degree of confidence, reflecting both their specialized training and the expectation that they would lead this component of care. These findings are consistent with previous research demonstrating that respiratory therapists and other ICU clinicians perceive ventilator withdrawal as a technically driven responsibility grounded in professional expertise. Respiratory therapists involved with withdrawal of advanced life-sustaining therapies viewed their role as highly technical and specific, requiring precision and confidence in ventilator management (Cullum, Madani, Cutler, & Reavis, 2022; Cottereau, et al., 2016). The findings of this thesis reinforce this understanding, demonstrating that Manitoba respiratory therapists perceived themselves as the professionals most equipped to manage the physiological and technical complexities of terminal extubation.

Simultaneously, participants did not describe the physical removal of the endotracheal tube as the most emotionally significant aspect of the process. Rather, it was viewed as one component of a broader continuum of care. This suggests that while technical performance was central to their role, participants understood terminal extubation as more than clinical actions.

6.1.2. Emotional Presence and Compassion

Participants emphasized that their role extended beyond purely technical responsibilities. Many described awareness of the emotional weight associated with terminal extubation and acknowledged the importance of providing compassionate, patient-centered care during end-of-life

situations. However, this relational aspect of care was often less clearly defined within their formal responsibilities, creating a space in which expectations were implicitly understood rather than explicitly articulated. Many described being acutely aware of the emotional weight of these moments for patients, families, and healthcare staff. They were expectations that were understood in practice but rarely formalized in policy, education, or institutional role descriptions. Participants often viewed their role as extending beyond ventilator management to include maintaining dignity, providing reassurance, and supporting a peaceful dying process. This would create ambiguity in how to reinforce the boundaries of emotional involvement. RTs recognized the importance of compassion and emotional presence yet often perceived these aspects of care as secondary to their central duties.

This aligns with broader literature on end-of-life care in intensive care settings, where clinicians frequently navigate dual expectations of technical proficiency and emotional presence, often without clear role delineation (Wiegand, Cheon, & Netzer, 2019; Kisorio & Langley, 2016; Ong, Ting, & Chow, 2017). Inherent challenges identified also related to the unclear prognosis in critically ill cases and unpredictable disease trajectories that caused confusion regarding advanced care directives. When prognoses are ever-changing and unique to each patient, this causes the healthcare team to question when to discuss end-of-life care with the patient and family members. Clinicians' experience of terminal care evolves over time as they learn to balance emotional engagement with professional detachment (Wiegand, Cheon, & Netzer, 2019; Kisorio & Langley, 2016; Ong, Ting, & Chow, 2017). Present findings extend this work by highlighting how respiratory therapists, in particular, may experience this relational component as peripheral to their formally recognized role, despite its perceived importance in practice. RTs might perceive emotional care as important but insufficiently acknowledged within their formal profession. This uncertainty added to the emotional complexity of the respiratory therapist's role, requiring them to adapt to both clinical and interpersonal unpredictability.

6.1.3. Structural Boundaries & Limited Involvement

Despite this sense of competence and responsibility, participants also described important structural boundaries that shaped their role. While they were central to the act of terminal extubation itself, their involvement in earlier stages of decision-making and family meetings was frequently limited. As a result, respiratory therapists were often positioned at the endpoint of the care process, tasked with enacting decisions that had been made by, typically the physicians, of the healthcare team. This positioning contributed to a perception of their role as both essential and constrained, defined not only by their technical expertise, but also by their partial inclusion within the broader continuum of care. Participants felt entrusted with executing the procedure yet often had the limited input into whether or when it occurred. RTs described this experience as both professionally frustrating and emotionally difficult, particularly when they felt decisions were delayed or inconsistent with the patient's condition.

Similar patterns have been identified in prior studies, where interdisciplinary hierarchies and role delineations limit the involvement of certain clinicians in end-of-life decision-making processes. In previous studies, nurses and physicians' emotions, psychosocial factors, and professional roles influenced decision-making processes, often creating differing levels of involvement and authority among team members (De Boer, Reimer-Kirkman, & Sawatzky, 2022; Gjessing, Steindal, & Kvande, 2023; Choi, Rodgers, Tocher, & Kang, 2022). Commonly identified hierarchical structures in decisions to end life-prolonging treatment, where collaboration was present but unevenly distributed. Among healthcare workers, withholding and withdrawing life-sustaining treatment involves complex negotiations among clinicians and families, shaped by individual beliefs, institutional policies, and communication practices (De Boer, Reimer-Kirkman, & Sawatzky, 2022; Gjessing, Steindal, & Kvande, 2023; Choi, Rodgers, Tocher, & Kang, 2022).

Participants in this study echoed these findings, describing protocols that sometimes-lacked clarity and prolonged suffering through continued life-sustaining interventions. Family

receptiveness, physician philosophy, and moral perspectives all influenced decision-making processes in ways that could affect the respiratory therapists' role. These structural boundaries reinforced the perception that their role was both essential and constrained, which made them highly visible during implementation, but less visible during planning and discussion.

6.1.4. Objective Conclusion

These accounts suggest that, prior to the pandemic, respiratory therapists perceived their role in terminal extubation and ventilator withdrawal as one characterized by technical competence, emotional awareness, and partial professional autonomy. Their sense of role clarity was grounded in their expertise in ventilator management and their understanding of the importance of compassionate, patient-centered care. Simultaneously, this clarity was tempered by structural limitations that restricted their involvement in decision-making processes and reinforced disciplinary hierarchies.

This tension between autonomy in action and exclusion from decision-making reflects a broader dynamic described in critical care, which underscores the complexity of role perception and end-of-life care contexts (McAndrew & Leske, 2015; Laurent, Bonnet, Capellier, Aslanian, & Herbert, 2017). Healthcare professionals must navigate the intersection of clinical expertise, emotional labor, and organizational constraint. This interrelationship of action and perception, placed in the difficult nature of terminal extubation and ventilator withdrawal, surely underwent an adaptation as the COVID-19 pandemic progressed. The changes in scope, which shifted RTs expectations, began a period of inability to perform their roles "as intended" (McAndrew & Leske, 2015; Laurent, Bonnet, Capellier, Aslanian, & Herbert, 2017). However, establishing this pre-pandemic baseline is essential, as it provides context for understanding how the COVID-19 pandemic later disrupted and reshaped respiratory therapists' perceptions of their professional roles and responsibilities.

6.2. Objective 2

This section introduces the second objective by describing the impact of enacting ventilatory support withdrawal measures on Manitoba respiratory therapists' practice and professional identity. Participants' accounts suggest that these experiences extended beyond the technical execution of care, and significantly influenced emotional well-being, professional motivation, and self-perception within the respiratory therapy role. While terminal extubation had long been recognized as an emotionally and ethically demanding aspect of critical care practice, the findings demonstrate that the COVID-19 pandemic intensified these demands and altered how respiratory therapists experienced and interpreted this component of their work.

Across the data, the impact of terminal extubation was not described as a singular or isolated experience, but rather as a cumulative and evolving process. Participants described a progression in which the emotional and ethical demands of this aspect of care were initially recognized and managed within the context of routine practice but became increasingly intensified under pandemic conditions. Over time, this intensification contributed to shifts in how therapists experienced their work, including changes in emotional engagement, professional motivation, and sense of identity. To reflect this progression, the discussion of this objective is organized around two themes: *Shocks to the System*, which captures the early escalation of distress and emotional burden, and *Quality Care and Motivation Struggles*, which illustrates the longer-term consequences of sustained crisis conditions on professional engagement and identity.

6.2.1. Shocks to the System (Escalation of Distress)

During the early stages of the COVID-19 pandemic, participants described a marked intensification of the emotional and ethical demands associated with ventilatory support withdrawal. Changes to care processes, including restrictions on family presence and increased patient isolation, altered the context in which terminal extubation occurred, often amplifying the

emotional burden experienced by respiratory therapists. Participants reported that these changes affected not only patients and families, but also their own ability to engage in care in meaningful ways. The absence or limited presence of family members during end-of-life care was frequently described as distressing, as it disrupted what participants perceived to be an essential component of a “good death”.

Similar disruptions to end-of-life care practices during COVID-19 have been widely documented, with clinicians reporting significant emotional strain associated with patient isolation and altered dying processes (Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022; Palma, et al., 2022; Choi, Rodgers, Tocher, & Kang, 2022). Visitation restrictions fundamentally changed the relational dynamics of providing care, relying on healthcare workers to bridge the emotional gap between patients and their families. The absence of family presence contributed to heightened moral distress, as providers perceived a disconnect between institutional policies and their understanding of compassionate care. Prolonged patient isolation and limited opportunities for family interaction intensified the emotional burden of frontline workers, which would often lead to feelings of helplessness. Together, these situations show how pandemic-related constraints reshaped and amplified the emotional strain and complexity for healthcare providers (Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022; Palma, et al., 2022; Choi, Rodgers, Tocher, & Kang, 2022).

In some cases, participants described feeling as though they were assuming additional emotional responsibilities in the absence of family, further increasing the demands placed upon them. Respiratory therapists recounted acting not only as technical experts, but also as emotional surrogates by offering comfort, facilitating communication, and ensuring patients did not die alone. The redistribution of emotional labor aligns with findings from pandemic related research, suggesting that healthcare providers took on expanded relational roles in response to visitation restrictions (Milo, Gomez, Suarez, Calero, & Connelly, 2023). This role expansion impacted

interpersonal demands and blurred traditional professional boundaries. This shift increased the support responsibilities of RTs as they navigated both clinical and relational duties at the same time. This expansion of duties contributed to heightened emotional strain, particularly when RTs felt unable to maintain these relational roles while prioritizing technical tasks (Milo, Gomez, Suarez, Calero, & Connelly, 2023).

Simultaneously, system-level pressures, including increased patient volumes and resource constraints, limited therapists' ability to provide the level of care they felt was appropriate. This created a sense of moral tension, as participants navigated the gap between their professional values and the realities of practice during the pandemic. As a result, the impact of ventilatory support withdrawal began to shift from a manageable aspect of care to a source of heightened emotional and ethical strain. This escalation is consistent with broader literature documenting increased moral distress among healthcare workers during COVID-19, particularly in situations where care delivery was constrained by systemic factors (Tratchenberg, et al., 2022; Sherman & Petros, 2024). During this time, participants' experiences suggest an erosion of the mechanisms that had previously enabled them to manage the demands of terminal extubation, leading to a growing sense of distress and vulnerability within their professional roles (Tratchenberg, et al., 2022; Sherman & Petros, 2024).

6.2.2. Quality Care and Motivation Struggles (Burnout and Detachment)

As the pandemic progressed and system pressures intensified, participants descried a further escalation in the impact of ventilatory support withdrawal on their practice and identity. Prolonged exposure to high-acuity care environments, combined with ongoing resources limitations and emotional exhaustion, contributed to a sense of burnout that significant altered how they experienced their work. These findings are consistent with the growing body of research that documents high levels of burnout and psychological distress amongst respiratory therapists and

other frontline healthcare workers during the COVID-19 pandemic (Miller, et al., 2021a; Spirczak, Kaur, & Vines, 2022; Roberts, et al., 2022). Sustained workload pressures and staffing shortages were key contributors of exhaustion and depersonalization among clinicians, while prolonged exposure to critically ill patients and high mortality rates reduced workers' sense of professional efficacy. The ongoing strain and limited recovery time between emotionally intense events also contributed to symptoms of burnout and disengagement from work (Miller, et al., 2021a; Spirczak, Kaur, & Vines, 2022; Roberts, et al., 2022).

Participants frequently described a shift toward emotional detachment as a means of coping with the cumulative demands of care. Terminal extubation, once experienced as a significant and emotionally charged event, was increasingly described as routine, procedural, or "just another task". This shift was often accompanied by a sense of loss, as participants reflected on a diminished capacity to engage with patients in a meaningful or compassionate way. Patterns of depersonalization and emotional withdrawal have similarly been identified in studies of clinical burnout, where detachment emerges as a protective yet concerning response to prolonged stress (Jang, et al., 2021; D'Alessandro-Lowe, et al., 2023). While emotional distancing may function as a short-term coping mechanism, it may also signal a deeper erosion of emotional engagement and professional fulfillment. Feelings of helplessness were also prominent, particularly in situations where therapists perceived that they were unable to provide the level of care they believed patients deserved (Jang, et al., 2021; D'Alessandro-Lowe, et al., 2023). Participants described frustration and moral distress when institutional constraints prevented them from delivering individualized, compassionate care aligned with their professional values. Over time, these repeated experiences began to shape how participants understood themselves as clinicians, with some describing a growing disconnect between their professional identity and their daily practice. Current literature situated in post-pandemic research frequently discusses this erosion of professional identity (Shi, et al., 2025; Wojnar-Gruszka, et al., 2025). Sustained exposure to constrained care environments has

been associated with disillusionment, reduced motivation, and reconsideration of career goals. The impact of ventilatory support withdrawal extended beyond individual patient encounters and became part of a broader experience of emotional exhaustion and professional discouragement (Shi, et al., 2025; Wojnar-Gruszka, et al., 2025). The findings in this study suggest that the cumulative strain of repeated exposure to ethically and emotionally complex deaths under crisis conditions contributed not only to burnout, but also to a reconfiguration of how respiratory therapists experienced their work and perceived their professional identity.

6.2.3. Objective Conclusion

These findings demonstrate that the impact of enacting ventilatory support withdrawal measures on respiratory therapists' practice and professional identity intensified significantly during the COVID-19 pandemic. In the early stages of the pandemic, participants described escalating emotional and moral strain as restrictions on family presence, patient isolation, and changing care processes disrupted their ability to provide care in ways aligned with their professional values. These changes increased emotional labor and contributed to heightened stress.

As the pandemic progressed and system pressures escalated, this distress these evolved into burnout, emotional detachment, and a growing sense of disconnection from previously held ideals of care. Participants described a shift from emotionally engaged, patient-centered practice toward procedural and task-oriented care, often accompanied by feelings of helplessness and diminished professional fulfillment. In the post-pandemic context, participants described an ongoing process of reflection, adaptation, and identity reconstruction, shaped by the cumulative impact of their experiences (Jang, et al., 2021; Tratchenberg, et al., 2022). The pathway from distress, to burnout, to identity transformation is consistent with broader literature that describes the progression that psychological impact takes when workers endure continuous healthcare crises (Jang, et al., 2021; Tratchenberg, et al., 2022). This discussion suggests that ventilatory support withdrawal is not only

a clinical responsibility, but also a deeply influential and emotionally consequential component of professional identity formation, particularly when enacted under conditions of constant constraint.

6.3. Objective 3

This section discusses the third objective of describing how the COVID-19 pandemic changed the experienced of terminal extubation and ventilator withdrawal for Manitoba respiratory therapists. Participants consistently framed their accounts in relation to a pre-pandemic baseline, emphasizing that while terminal extubation had always been an emotionally and ethically complex aspect of care, the conditions under which it was enacted changed substantially during the pandemic. These changes affected not only the practical delivery of care, but also the emotional, relational, and professional meaning associated with the experience.

Across the data, participants described a clear progression in which established practices were initially disrupted, subsequently intensified under sustained system pressures, and ultimately resulted in lasting changes to how terminal extubation was experienced and understood. To reflect this trajectory, findings are presented across the final three themes corresponding to different phases of the pandemic: *Shocks to the System,* which captures the initial disruption to established care processes; *Quality Care and Motivation Struggles,* which reflects the peak impact of sustained crisis conditions; and *Working in the New Normal*, which illustrates the enduring and post-pandemic changes that continue to shape practice. References to pre-pandemic care are used throughout as a point of comparison to demonstrate the extent and nature of these changes.

6.3.1. Shocks to the System (Initial Disruption)

As discussed in previous objectives, participants described the early stages of the COVID-19 pandemic as a period of rapid and often disorienting disruption to established practices surrounding terminal extubation. While the technical process of ventilator withdrawal remained

largely unchanged, the broader context in which it occurred was significantly altered, infection control measures, visitor restrictions, and evolving institutional policies introduced new constraints that reshaped how end-of-life are was delivered. These disruptions are well documented in current research, where evidence identified clinicians' reports of significant changes to care environments despite continuity in clinical expectations (Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022; Cottereau, et al., 2016). Visitation restrictions and isolation protocols fundamentally changed the relational and communicative dimensions of end-of-life care, which leaves healthcare workers to mediate the interactions between patients and families. Even when contingency plans enable ICU procedures to continue, shifts in organizational context and workflow can substantially alter the lived experience of care delivery, particularly in high-stakes situations where stability is key (Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022; Cottereau, et al., 2016). This evidence illustrates how, despite the procedural continuity that was implemented, profound changes in the lived experience of providing terminal extubation during the COVID-19 pandemic still occurred.

One of the most frequently described changes was the limitation or absence of family presence during terminal extubation. Participants emphasized that, prior to the pandemic, family involvement was a central component of end-of-life care, contributing to a sense of dignity and emotional support for both patients and their loved ones. The removal or restriction of this presence was experienced as a profound shift, altering not only the patient and family experience, but also the meaning of the event for respiratory therapists themselves. In research literature, many studies have reported similar findings in ICU settings, where restricted family presence during COVID-19 significantly altered perceptions of quality care during dying and increased emotional burden on clinicians (Choi, Rodgers, Tocher, & Kang, 2022; Palma, et al., 2022). Limitations on family visitation prevented opportunities for communication, closure, and shared decision-making, leading healthcare workers to perceive end-of-life care as less holistic and more fragmented. The absence of family members also heightened the sense of responsibility to provide emotional

support, while also contributing to moral distress when care no longer aligned with their understanding of optimal care while dying. This evidence reinforces how visitation restrictions reshaped both the experience and perceived quality of end-of-life care provided by respiratory therapists (Choi, Rodgers, Tocher, & Kang, 2022; Palma, et al., 2022).

Additionally, participants described the introduction of personal protective equipment and distancing protocols as creating both physical and emotional barriers between themselves and their patients. These changes contributed to a sense of detachment, as therapists navigated the challenge of providing compassionate care within an increasingly constrained environment. The rapid pace of change and the lack of clear guidance in the early stages of the pandemic contributed to uncertainty and instability in practice, a phenomenon widely observed among frontline healthcare workers during COVID-19 (Maduke, Dorroh, Bhat, Krvavac, & Regunath, 2021; Milo, Gomez, Suarez, Calero, & Connelly, 2023). Inconsistent communication and frequently changing infection control protocols left clinicians feeling uncertain about best practices, particularly in high-pressure clinical settings. Rapidly evolving expectations and the need to adapt workflows in real time contributed to a diminished sense of confidence and control among healthcare providers. The early pandemic conditions affected not only the care delivery, but also clinicians' ability to feel grounded and assured in their professional roles (Maduke, Dorroh, Bhat, Krvavac, & Regunath, 2021; Milo, Gomez, Suarez, Calero, & Connelly, 2023). The participants' accounts, when considered with current literature together, suggest that the initial impact of the pandemic was not the creation of entirely new challenges, but rather the interruption of established practices and expectations that had previously shaped how terminal extubation were experienced.

6.3.2. Quality Care and Motivation Struggles (Peak Impact)

As the pandemic progressed and system pressures intensified, participants described a further transformation in their experiences of terminal extubation. What had initially been

experienced as disruption evolved into a more sustain and pervasive sense of strain, as increasing patient volumes, resource limitations, and prolonged exposure to high-acuity care environments compounded the challenges of practice. This escalation reflects broader findings in pandemic research, where prolonged system strain was associated with significant deterioration in working conditions and clinician well-being (Miller, et al., 2021a; Spirczak, Kaur, & Vines, 2022; Roberts, et al., 2022). Sustained surges in patient acuity and staffing shortages contributed to worsening workload demands and emotional exhaustion among frontline clinicians. Prolonged exposure to high-intensity care environments were linked to increased burnout and reduced job satisfaction. Ongoing resource constraints and insufficient recovery time between shifts exacerbated psychological strain, contributing to declining overall well-being among healthcare workers (Miller, et al., 2021a; Spirczak, Kaur, & Vines, 2022; Roberts, et al., 2022).

During this phase, participants frequently described a diminished capacity to provide what they considered to be quality end-of-life care. Constraints on time, staffing, and resources limited opportunities for meaningful patient interaction, while ongoing restrictions on family presence continued to shape the context in which terminal extubation occurred. As a result, the process was increasingly experienced as procedural, or task-oriented, devoid of sentiment, rather than as a distinct and significant moment of care. In studies assessing ICU clinicians performing task-based care during COVID-19, efficiency-driven practices often replaced relational aspects of care under crisis conditions (Tratchenberg, et al., 2022; Milo, Gomez, Suarez, Calero, & Connelly, 2023). Clinicians increasingly relied on standardized workflows and rapid task completion to manage the overwhelming patient workloads that came with each transmission wave. This reduced the opportunities for patients to participate in emotional engagement with their families and healthcare providers. Heightened system pressures and staffing issues led to a prioritization of procedural efficiency, demonstrating how crisis conditions frequently reorient clinical practice

toward task completion. This reshapes both the experience and end-of-life care performed by respiratory therapists (Tratchenberg, et al., 2022; Milo, Gomez, Suarez, Calero, & Connelly, 2023).

The shift was accompanied by a deepening sense of emotional exhaustion that patients were not receiving the level of care they deserved, particularly in the absence of family support. Over time, these experienced contributed to a sense that the meaning of terminal extubation had changed, moved away from a carefully managed and emotionally significant event toward something that was depersonalized. This erosion of meaning aligns with the current studies on burnout and moral distress, where clinicians report a loss of connection to the values that initially defined their professional roles (Jang, et al., 2021; D'Alessandro-Lowe, et al., 2023). Repeated exposure to ethically challenging situations in high-acuity settings contributed to emotional exhaustion and a gradual detachment from the relational aspects of care. Sustained workplace stress and moral conflict also lead clinicians to feeling disconnected from their original career motivations, often describing a diminished sense of purpose and meaning in their work. The prolonged exposure to ethically and emotionally demanding conditions can fundamentally reshape clinicians' sense of professional identity and value alignment (Jang, et al., 2021; D'Alessandro-Lowe, et al., 2023).

In this context, the pandemic did not simply alter isolated aspects of practice but fundamentally reshaped the experience of terminal extubation by intensifying existing challenges and embedding them within a broader landscape of the unknown.

6.3.3. Working in the New Normal (Lasting Changes)

The late stages of the pandemic and beginning of the post-pandemic period were described by participants as the product of their endurance they experienced and understood terminal extubation through. While some of the acute pressures of earlier phases had subsided, many of the shifts created by the pandemic persistent, and created a "new normal" in respiratory therapy

practice. Other long-term transformations were found in existing literature, where healthcare workers report enduring changes to practice, expectations, and emotional engagement following prolonged exposure to pandemic stressors (Nguyen, et al., 2025; Wojnar-Gruszka, et al., 2025). Clinicians often carry forward altered work habits and recalibrated expectations of care, even after acute system pressures had subsided, indicating that pandemic-related changes became embedded in post-pandemic practice. Healthcare workers also experienced lasting shifts in professional identity and emotional boundaries, with many describing a sustained redefinition of what they considered appropriate or feasible care. The impact of the pandemic extends beyond immediate crisis conditions, producing durable changes in both clinical practice and self-understanding (Nguyen, et al., 2025; Wojnar-Gruszka, et al., 2025).

Participants reflected on lasting changes to both the practical and emotional dimensions of care. In some cases, adaptations made during the pandemic, such as modified workflows or altered expectations, continued to influence how terminal extubation was conducted. Participants also described ongoing emotional effects, including residual fatigue that required coping mechanisms, and a changed relationship to their work. This echoes the persistent psychological and professional impacts of COVID-19 identified in research literature, which remained even after the acute system pressures eased (Wintermann, et al., 2025; Soto-Camara, et al., 2024). Healthcare workers continued to experience symptoms of emotional exhaustion and stress long after peak transmission waves occurred. This suggests that recovery from sustained workplace strain is often gradual and incomplete. Altered work patterns and prolonged exposure to high-intensity clinical environments contributed to enduring changes in clinicians' well-being, coping strategies, and professional engagement. This shows that the effects of the pandemic extend beyond immediate operational disruptions, shaping both the emotional and structural dimensions of healthcare practice over time (Wintermann, et al., 2025; Soto-Camara, et al., 2024).

Most importantly, participants did not describe a simple return to pre-pandemic conditions. Instead, their accounts suggest that the pandemic fundamentally reframed their understanding of end-of-life care, influencing how they interpreted its significance and how they engaged with it. For some, this involved a recalibration of expectations and a greater acceptance of systemic limitations. For others, it was associated with a lingering sense of loss related to the perceived erosion of certain aspects of care that had previously been central to care. This process of transformation and meaning making is consistent with literature on post-crisis professional identity reconstruction, where clinicians integrate challenging experiences into revised understandings of their roles (Meredith, et al., 2024; Rizzi, et al., 2025). Clinicians were often found to engage in reflective sense-making processes where a reassessment of their values helps them redefine what constituted a meaningful and sustainable clinical practice in the aftermath of a pandemic. Reconstruction of professional identities through the incorporation of experiences related to constraint, moral tension, and adaptation, into a more pragmatic understanding of their roles. Post-Pandemic adjustment involves not only recovery, but an ongoing reconfiguration of professional meaning and identity shaped by lived experience (Meredith, et al., 2024; Rizzi, et al., 2025). This phase reflects a process of integration, in which participants incorporated their pandemic experiences into a revised understanding of what terminal extubation entails within the current healthcare context.

6.3.4. Objective Conclusion

In summary, these findings demonstrate that the COVID-19 pandemic significantly altered the experiences of terminal extubation and ventilator withdrawal for respiratory therapists. While pre-pandemic practice provided a baseline characterized by emotional and ethical complexity, the onset of the pandemic disrupted established processes and introduced new boundaries in the reshaping of care. Through the change in system pressures, these disruptions evolved into sustained

strain and contributed to the changes in how terminal extubation was experienced and interpreted. This included a shift toward more procedural and less relational understandings of care.

The post-pandemic context had participants describing the lasting effects of the pandemic that continued to impact the practical and emotional dimensions of their work. The pathway from disruption, to crisis, then adaptation, aligns with current literature involving the impact of COVID-19 on healthcare workers. In conclusion, these findings suggest that the pandemic did not only fundamentally change the nature of terminal extubation, but also, was transformed through the escalation of crisis until its evolved state matched the aftermath's landscape that RTs would continue to work in long after the pandemic ended.

6.4. Overall Summary

This discussion chapter examined the findings of this thesis in relation to the three study objectives and situated these findings within the broader body of existing literature. Collectively, the findings illustrate the respiratory therapists' experiences of terminal extubation and ventilator withdrawal during the COVID-19 pandemic were shaped by an interaction between technical responsibilities, emotional labour, ethical tensions, and systemic constraints. While each objective addressed a distinct aspect of these experiences, together they reveal a broader narrative of disruption, adaptation, and professional transformation.

The first objective explored how Manitoba respiratory therapists perceived their role and responsibilities during terminal extubation and ventilator withdrawal. Findings demonstrated that, prior to the COVID-19 pandemic, participants described a relatively stable and clearly defined role grounded in technical competence and professional autonomy. Simultaneously, their accounts revealed that this role extended beyond technical responsibilities to include emotional support and compassionate end-of-life care, despite these relational aspects often being less formally recognised. Participants also described structural limitations in their involvement in decision-making processes, highlighting a tension between autonomy in practice and exclusion from broader

care planning. These findings suggest that respiratory therapists' perceptions of their roles were shaped not only by professional expectations, but also by institutional and interdisciplinary structures that defined the boundaries of their practice.

The second objective examined the impact of enacting ventilatory support withdrawal on respiratory therapists' clinical practice and professional identity. Findings revealed that the emotional and ethical strain associated with terminal extubation intensified significantly during the pandemic. Early disruptions to end-of-life care processes, particularly visitation restrictions and patient isolation, increased emotional labour and moral distress among participants. As system pressures escalated, participants described experiences of burnout, emotional detachment, and a diminished capacity to provide the level of compassionate, patient-centered care they valued. Over time, these cumulative experiences caused changes in professional identity, as participants described a growing disconnection between their ideals of care and the realities of practice. These findings highlight how repeated exposure to ethically and emotionally complex events under crisis conditions can shape not only clinicians' emotional well-being, but also their understanding of themselves as healthcare professionals.

The third objective explored how the COVID-19 pandemic changed the experience of terminal extubation and ventilator withdrawal for Manitoba respiratory therapists. Findings suggest that the pandemic fundamentally altered both the practical and emotional dimensions of this experience. Initially, the pandemic disrupted established workflows and relational aspects of care through infection control measures, visitor restrictions, and evolving institutional policies. Through the period of the pandemic, these changes became embedded within broader patterns of system strain, contributing to increasingly procedural and depersonalized experienced of terminal extubation. The post-pandemic period had participants describing lasting changes to their expectations, coping strategies, and perceptions of end-of-life care. This suggests that these

experiences were not temporary disruptions, but enduring transformations in clinical practice and professional meaning.

All three objectives answer the overarching research question by demonstrating that Manitoban respiratory therapists experienced terminal extubation and ventilator withdrawal during the COVID-19 pandemic as increasingly complex, emotionally burdensome, and professionally transformative. The pandemic did not create these challenges in isolation, but instead intensified pre-existing emotional and ethical tensions while introducing new structural and relational barriers to care. This reshaped how RTs understood their role, conducted their responsibilities, and made meaning of their work. These findings contribute to the limited body of profession-specific literature on respiratory therapists and provide important insight into the lasting impacts of pandemic-related end-of-life care on clinical practice, professional identity, and psychological well-being.

7.0. Conclusion

This study explored how respiratory therapists in Manitoba perceived the process of terminal extubation and ventilator withdrawal during the COVID-19 pandemic and examined the self-reported impacts of these experiences on their professional practice and personal well-being. In the context of a global health crisis marked by heightened mortality, evolving clinical protocols and significant system strain, this research sought to better understand the emotional, ethical, and clinical dimensions of terminal extubation and ventilator withdrawal from the perspective of respiratory therapists.

7.1. Summary of Key Findings

Findings from this study, demonstrate that respiratory therapists experience terminal extubation as a complex and multifaceted aspect of care, shaped by both clinical responsibilities and emotional engagement. First, participants described their role in terminal extubation as both technically demanding and deeply relational, requiring a balance between procedural expertise and compassionate care.

Second, the enactment of terminal extubation and the withdrawal of mechanical ventilation was found to have significant impacts on respiratory therapists' professional identity and emotional well-being. Participants reported experiences of moral and emotional strain, particularly in situations where care delivery conflicted with personal values or was constrained by external factors.

Third, the COVID-19 pandemic substantially altered the context and experience of terminal extubation. Participants described a progression from initial disruption to sustained system stain and, ultimately, to lasting changes in practice and perception. These changes included reduced family presence, increased procedural focus, and ongoing emotional consequences that extended beyond the acute phases of the pandemic.

7.2. Alignment with Existing Research

The findings of this study align with existing literature that characterizes terminal extubation and ventilator withdrawal as inherently complex, emotional, and ethically challenging. Participants consistently described terminal extubation as a process requiring both technical expertise and emotional engagement, which reflects prior research highlighting the dual clinical and relational nature of end-of-life care (Wiegand, Cheon, & Netzer, 2019; Kisorio & Langley, 2016). Similarly, the emotional burden and moral tensions reported by participants are consistent with literature describing the ethical complexity of withdrawing life-sustaining treatment and the impact this has on healthcare providers (McAndrew & Leske, 2015; St. Ledger, et al., 2013). These parallels suggest that, even prior to the pandemic, terminal extubation was still an experience that was significant and demanding of workers in their clinical practice.

7.2.1. Pre-Pandemic End-Of-Life Care

While these findings are consistent with pre-pandemic literature, this study also extends existing knowledge by demonstrating how the COVID-19 pandemic intensified these challenges. Participants described increased emotional exhaustion, moral distress, and a diminished capacity to provide what they perceived as quality care under conditions of system strain (Miller, et al., 2021a). This aligns with broader research documenting elevated levels of burnout, psychological distress, and moral issues among healthcare workers during the pandemic. Current research literature highlighted situations where respiratory therapists experienced high levels of emotional exhaustion, depersonalization, and reduced professional fulfillment during COVID-19. These findings mirror participants' accounts of terminal extubation becoming increasingly procedural and task-oriented, suggesting that burnout may contribute to a diminished capacity to engage in the relational and emotional aspects of care (Miller, et al., 2021a). Importantly, burnout in these studies is not framed as an individual failing, but as a systemic outcome of prolonged exposure to high-acuity environments, staffing shortages, and sustained crisis conditions (Jang, et al., 2021). These

factors are also central in participants' narratives. This reinforces the interpretation that the mechanization of care described in this study reflects broader structural pressures rather than a shift in professional values (Jang, et al., 2021).

7.2.2. Ramifications of COVID-19

Similarly, research on moral distress provides further context for understanding the ethical and emotional tensions described by participants (Tratchenberg, et al., 2022). Studies found that clinicians frequently experienced distress when institutional constraints prevented them from providing care aligned with their professional and moral standards. In the context of this study, restrictions on family presence and limited time for patient interaction can be understood as key contributors to such distress, as they disrupted the ability to deliver what participants perceived as quality care (Tratchenberg, et al., 2022). Other literature demonstrates that Canadian respiratory therapists who experienced heightened moral distress during the pandemic were more likely to report adverse psychological and functional outcomes, including considerations of leaving their roles (D'Alessandro-Lowe, et al., 2023). This directly supports participants' descriptions of emotional fatigue, reduced motivation, and a changing relationship with their work, suggesting that the impacts identified in this study are consistent with broader national trends (D'Alessandro-Lowe, et al., 2023).

Importantly, participants in this study also described actively resisting institutional barriers in order to uphold their moral and professional values. In their shared stories, respiratory therapists described finding creative and unconventional solutions to facilitate compassionate end-of-life experiences for patients and families despite restrictive visitation policies. Some examples included transporting ventilated patients outside the ICU to allow final in-person goodbyes with family members, others included discreetly allowing parents access to neonatal wards to be present with sick infants. These actions reflect attempts to preserve dignity, family connection, and the relational aspects of care that RTs viewed as fundamental to ethical practice. Existing literature

suggests that when healthcare providers perceive institutional policies as conflicting with their moral obligations, they may experience significant internal conflict (St. Ledger, et al., 2013; Riedel, Kreh, Kulcar, Lieber, & Juen, 2022). This would often be referred to as moral distress or moral injury. In this context, going against the institution's rules on visitation may have functioned as both an act of moral agency, and as a coping strategy to reconcile their professional duties with personal values (St. Ledger, et al., 2013; Riedel, Kreh, Kulcar, Lieber, & Juen, 2022). However, these actions may have also carried its own psychological consequence that impacts the individual (Adeyemo, Tu, Falako, & Keene, 2022; Riguzzi & Gashi, 2021). Fear of disciplinary repercussions, emotional burden, and heightened stress associated with navigating ethical ambiguity may weigh heavily on healthcare workers' consciences, even if their original intention was to maintain patient care. These findings suggest that, during crisis situations, respiratory therapists are not only passive recipients of institutional policies, but active negotiators of ethical care within constrained systems (Adeyemo, Tu, Falako, & Keene, 2022; Riguzzi & Gashi, 2021).

Beyond immediate distress, emerging literature also highlights the cumulative and potentially long-term psychological effects of pandemic-related work (Nguyen, et al., 2025). Healthcare identified persistent symptoms of anxiety, depression, and stress among frontline workers well beyond the acute phases of the pandemic. These findings resonate with participants' reflections on lingering emotional effects and the enduring nature of the "new normal" described in the results (Nguyen, et al., 2025). Institutional challenges during the pandemic also contributed to feelings of distrust, disillusionment, and emotional strain (Sherman & Petros, 2024). This provides additional insight into participants accounts of redefined expectations and acceptance of systemic limitations, suggesting that these shifts are not merely individual adaptations but are shaped by broader organizational and structural dynamics (Sherman & Petros, 2024).

The evidence stemming from the literature review of this thesis reinforce the interpretation that the changes in how terminal extubation was experienced are deeply embedded within the

wider context of psychological strain and system-level disruption. This movement is identifiably towards a more depersonalized and procedural form of practice. Rather than representing an isolation phenomenon, the findings of this thesis align with a broader pattern also found in the existing literature that highlights how sustained crisis conditions can fundamentally alter both the practice and meaning of care.

7.2.3. Unique Contributions of Respiratory Therapists

This study contributes to a relatively small body of literature that solely focuses on respiratory therapists' experiences performing terminal extubation and the withdrawal of mechanical ventilation. Previous studies have explored the role of nurses and physicians in withdrawal of life-sustaining treatment, but few have examined the perspectives of respiratory therapists, despite their central role in terminal extubation (Choi, Rodgers, Tocher, & Kang, 2022; Cottereau, et al., 2016). The findings of this study align with emerging research that showcases the significant emotional and professional impact of these responsibilities on respiratory therapists. By exploring this group in the Canadian context, this study expands current evidence and underscores the need for greater recognition of the RTs role in end-of-life care.

7.3. Study Implications

The findings of this study have several important implications across the practical, professional, organizational, and theoretical contexts. At the clinical practice level, the results highlight a need to preserve the relational and compassionate dimensions of terminal extubation, even in the context of significant system strain. Participants consistently described a shift from an event-centered experience toward a more procedural and task-oriented approach during the pandemic. This suggests a need for the development of structured guidelines and supports that enable clinicians to maintain meaningful engagement with patients and families, including strategies for communication and presence when interactions are limited. Reinforcing these elements may help mitigate the perceived erosion of quality care described by participants.

At the professional level, this study shows the complex and evolving care of respiratory therapists in acute, critical care. While their responsibilities are often framed in technical terms, the findings demonstrate that their work also involves significant emotional and ethical engagement. The pandemic not only unsettled clinical practices, but respiratory therapists' sense of professional identity, with some participants describing a diminished connection to their work or a need to recalibrate their expectations. These findings point to the importance of integrating emotional preparedness, reflective practice, and coping strategies into both training and ongoing professional support. Recognizing RTs as key contributors to the emotional and relational aspects of care may also help to validate their experiences and support workforce retention.

At the organizational level, this study shows the influence of systemic factors in shaping both the delivery and experience of terminal extubation. Policies related to infection control, visitor restrictions, and resource allocation played a significant role in altering the context of care, often limiting the clinicians' ability to provide what they perceived as appropriate patient support. The persistence of these changes into the post-pandemic period suggests that healthcare organizations must consider how to balance operational demands with the provision of compassionate care. This includes implementing sustainable staffing models, ensuring access to mental health resources, and developing policies that account for the emotional impact of terminal care on healthcare providers. Addressing these factors is essential not only for improving patient and family experiences, but also for supporting the well-being of the workforce.

At the theoretical level, this study illustrates how the meaning and experience of terminal extubation are dynamically shaped by context. The progression described by participants suggests that these experiences are not static but evolve in response to broader systemic pressures. Through the phases depicted in the themes of pre-pandemic baselines, through disruption and then peak strain, to a final redefined normal, the study extends the existing literature on moral distress, burnout, and emotional labour. The process-oriented perspectives demonstrate how these

phenomena develop and interact over time with a specific clinical context. By centering the experiences of respiratory therapists, this study addresses a notable gap in the literature, where the focus is typically on physicians and nurses. This thesis provides a more comprehensive understanding of the interdisciplinary nature of terminal extubation and ventilator withdrawal and the ways in which it is experienced in respiratory professions.

7.4. Study Strengths

The purpose of this thesis was to explore the psychological distress experienced by respiratory therapists that performed terminal extubation during the COVID-19 pandemic. This project contributed to a gap in the existing literature on the experience of Manitoban respiratory therapists as they navigated the effects of COVID-19 on the Canadian healthcare system. The structure of this thesis held a number of strengths in terms of the quality and rigour of its findings but still exhibited limitations in terms of potential biases.

7.4.1. Data Saturation

Data saturation is an important consideration in the design and conduct of this study guiding decisions regarding sample size, data collection, and analytic depth (Guest, Bunce, & Johnson, 2006; Saunders, et al., 2018). The qualitative nature of this thesis dictates that saturation is commonly understood as the point in which no new themes, insights, or patterns emerge from the data, indicating that the phenomenon under investigation has been explored with sufficient depth and breadth (Guest, Bunce, & Johnson, 2006; Saunders, et al., 2018). In this thesis, saturation is not treated as a purely numerical threshold, as there were no quantitative methods used in the processes of the study (Sandelowski, 2000; Maxwell, 2013; Tracy, 2020). Instead, the richness, coherence, and completeness of the data collected is what is considered when acknowledging that a data saturation point has been satisfied. This approach is consistent with descriptive qualitative methodologies, which emphasize comprehensive, low-inference descriptions of participants'

experiences. The priority is the clarity and completeness of the data rather than just the sample size alone (Sandelowski, 2000; Maxwell, 2013; Tracy, 2020).

Achieving saturation is also closely tied to the credibility and trustworthiness of the findings. Credibility is enhanced through iterative data collection and analysis, whereby emerging themes were continuously compared across interviews and refined as new data was incorporated (Maxwell, 2013). The iterative approach aligns with the ongoing interaction between data collection and analysis as a key feature of qualitative research design. The consistency with which key themes appeared across participants, combined with the dept of individual accounts, supports the credibility of the analysis and suggests that the findings are grounded in a participant's lived experience rather than an isolated narrative (Maxwell, 2013).

Additionally, the study demonstrates comprehensive thematic coverage, as the final themes captured the full range of experiences described by participants across different phases of the COVID-19 pandemic. The organization of themes along a temporal trajectory was depicted in the results chapter of this thesis, as a pathway from pre-pandemic practice to initial disruption, peak strain, and a redefined, post-pandemic transformation. This temporal analysis supports the completeness of the analysis (Saunders, et al., 2018; Tracy, 2020). Furthermore, to balance the temporal understanding of transformation, a conceptual analysis of the themes in response to the study objectives was also conducted. The thematic structure reflects both recurrence and evolution of experiences over time, indicating that the data were sufficiently saturated to support both descriptive and interpretive insights (Saunders, et al., 2018; Tracy, 2020).

Related to thematic coverage is the attainment of methodological rigour during the utilized systematic coding procedures, transparency in analysis, and reflexivity measures throughout the research process (Nowell, Norris, White, & Moules, 2017). As previously discussed, coding is an iterative process, with regular revisiting of transcripts to ensure that interpretations remained grounded in the data. The process aligns with established criteria for qualitative rigor, including

credibility, dependability, and confirmability (Nowell, Norris, White, & Moules, 2017). Attention to reflexivity was maintained throughout the study as a way to recognize the influence of the researcher's positionality (Berger, 2015). Reflexivity is important in qualitative research to acknowledge how the researchers' own experiences may shape the analytic process. Reflexive awareness contributed to ongoing critical engagement with the data, supporting the transparency of findings and ensuring adequate data saturation (Berger, 2015).

The concept of saturation in this study is closely linked to the transferability of findings. While qualitative research does not aim for statistical generalizability, the provision of detailed context-rich descriptions allows the assessment of applicability of findings to other settings or populations (Tracy, 2020). The consistency of the data and the clear articulation of themes, support the potential transferability of these findings to similar critical care context, especially those that involve respiratory therapists. The value here lies not only in specificity, but in the capacity to use this data to inform understanding in related contexts (Tracy, 2020).

In summary, these considerations suggest that data saturation was achieved in a manner that supports the credibility, depth, and overall quality of the research study. Rather than representing a fixed endpoint, saturation in this study reflects a time at which the provided data is sufficiently rich and coherent, thereby giving us a comprehensive account of participants' experiences. This allows for confident and meaningful contributions to existing literature.

7.4.2. Participant-Centered Perspectives

A key strength of qualitative research is its emphasis on centering participant perspectives, allowing individuals to describe their experiences in their own words (Creswell & Poth, 2018). This approach is particularly valuable when exploring complex human experiences, as it prioritizes producing deep meanings over quantitative measuring. By foregrounding participants' voices, qualitative studies can capture emotions, beliefs, and interpretations that may be overlooked by structured or quantitative methods. This participant-centered focus enhances the authenticity of

findings and ensure that conclusions are grounded in lived experience rather than researcher assumptions (Creswell & Poth, 2018). The respiratory therapists that participated in this study described the positive feelings that came with being a part of a study that provides a platform for RTs to promote the profession and bring awareness to the wider research world.

7.4.3. Contextual Depth

Qualitative research is well suited to capturing the contextual factors that shape human behavior and experience (Maxwell, 2013). Rather than isolating variables, qualitative approaches acknowledge the influence of social, organizational, and cultural environments on participants. This contextual dept allows researchers to examine how broader systems influence individual experiences. Workplace culture, institutional policies, or external stressors provide a more holistic understanding of the study findings (Maxwell, 2013).

Qualitative methods are particularly effective for investigating complex, emotionally charged, or sensitive topics that may be difficult to quantify (Kvale & Brinkmann, 2015). Semi-structured interviews offer flexibility and create space for participants to reflect on personal experiences, including trauma, distress or ethical challenges. The qualitative description approach that was utilized supports a deeper exploration of meaning while allowing participants to guide the conversation toward what they perceive as most significant to share. This produces richer and more nuanced data to build the relevant discussions on (Kvale & Brinkmann, 2015).

7.4.4. Enhanced Ethical Sensitivity

Qualitative research emphasizes ethical sensitivity and researcher reflexivity, both of which strengthen study rigor (Berger, 2015). Researchers are encouraged to reflect on their positionality, assumptions, and influence on the research process, promoting transparency, and ethical awareness. This reflexive approach is particularly important when working with vulnerable populations, as it supports respectful engagement and minimizes potential harm to participants

(Berger, 2015). Many participants spoke of how having the opportunity to share their experiences helps to process their experiences and provides a type of catharsis at being given the space to voice their stories.

Another strength related to this sensitivity is the methodological flexibility that semi-structured designs afford researchers. It allows adaptation to interview questions as data collection progresses, which enables the exploration of unexpected insights or emerging themes (Tracy, 2020). This responsiveness enhances the relevant of the study and ensures that important dimensions of the phenomenon are not constrained by rigid data collection instruments. For underexplored research areas with underrepresented populations, such as respiratory therapists, this adaptability is particularly valuable in research production (Tracy, 2020).

7.4.5. Contribution to Policy and Practice

Qualitative research offers meaningful contributions to practice and policy by illuminating gaps between institutional structures and lived experience (Patton, 2015). By capturing firsthand accounts, qualitative findings can inform practical recommendations and guide improvements in professional practice, organizational support, and policy development. This applied relevance makes the findings in this thesis especially applicable to the clinical practice of the healthcare field (Patton, 2015).

7.5. Study Limitations

The study employed a descriptive qualitative design using semi-structured interviews to explore the experiences of respiratory therapists in Manitoba. While this approach is well suited to the thesis objectives and have the aforementioned strengths, a number of limitations also exist.

7.5.1. Participant Demographics

The first limitation relates to the population recruited for this thesis study and the geographical location of the participants included in this study. Provincial healthcare structures,

institutional policies, and workforce conditions may differ within Canada (Gibney, et al., 2022). Variations in healthcare system capacity, regional COVID-19 burden, staffing models, and visitation or infection control policies may have shaped experiences differently in other provinces and territories. As such, this limits the transferability of findings to other healthcare contexts, as all respiratory therapists included in this study were practicing in Manitoba (Gibney, et al., 2022). As descriptive qualitative research does not aim for statistical generalizability, the findings of this study echo the larger overarching project (Anaraki, Mukhopadhyay, Karaivanov, Wilson, & Asghari, 2022; Colorafi & Evans, 2016). This thesis focused exclusively on Manitoba respiratory therapists and may therefore be limited in its ability to apply identified themes to the broader project's participant population. This is especially relevant for participants practicing in rural or remote settings, where healthcare access, staffing, and resource limitations may differ substantially from urban centres. As such, the participants from this study all came from larger hospital facilities in urban centres (Anaraki, Mukhopadhyay, Karaivanov, Wilson, & Asghari, 2022; Colorafi & Evans, 2016).

A second limitation relates to the professional scope of the study. Since the focus is specifically on respiratory therapists, in order to address an identified gap in the literature, this narrow lens excludes the experiences of other healthcare professionals involved in end-of-life care (Kisorio & Langley, 2016; Wiegand, Cheon, & Netzer, 2019). Existing literature demonstrates that nurses, physicians, and other frontline healthcare workers also experienced significant emotional burden, moral distress, and burnout during the COVID-19 pandemic. The interdisciplinary end-of-life care means that many of the accounts described by participants may overlap with those of other professionals who worked under similar pressures and institutional constraints (Kisorio & Langley, 2016; Wiegand, Cheon, & Netzer, 2019). These findings may reflect profession-specific interpretations of broader systemic and emotional challenges rather than experiences unique to respiratory therapists alone (Cullum, Madani, Cutler, & Reavis, 2022). By isolating the RT

perspective, this study contributes insight to a unique area of research that historically, is dominated by nurses and physicians. Future research involving interdisciplinary samples may provide a more comprehensive understanding of the shared and distinct experiences of healthcare professionals involved in terminal extubation and ventilator withdrawal (Cullum, Madani, Cutler, & Reavis, 2022).

7.5.2. Potential Biases

The recruitment of participants for this study was also done on a voluntary basis, which creates a potential sampling bias (Creswell & Poth, 2018). Participants that volunteered to participate in an interview may have had particularly meaningful or emotionally salient experiences, which could influence the range of experiences captured. The study's findings may be limited as some viewpoints within the broader respiratory therapy population may not be fully represented. Although sampling bias does not undermine the descriptive intent of this qualitative study, it is important to acknowledge its potential influence on the application of this study's findings (Creswell & Poth, 2018).

Since data collection relied on retrospective self-reporting, this presents an opportunity for recall bias (Polit & Beck, 2021). Participants memories and recollections of events may be influenced by the passage of time, emotional processing, or other trauma they may have experienced. This limits the completeness of the descriptive data, which is likely to occur with high-stress environments such as clinical healthcare (Polit & Beck, 2021). Differences in communication style and comfort level may also have limited the richness of data or caused variability in the depth and detail of responses (Kvale & Brinkmann, 2015). Relatedly, participants may consciously or unconsciously frame their responses in ways they perceive as professionally acceptable. This presents an opportunity for social desirability bias, particularly when discussing sensitive topics, that may lead to underreporting of more vulnerable experiences (Kvale & Brinkmann, 2015).

7.5.3. Funding & Financial Constraints

Qualitative interviews and in-depth analysis can be costly processes. Limitations related to the practical constraints around time and resources may have affected the sample size, duration of interviews, or ability for follow-up procedures in the study (Tracy, 2020). Resources such as funding and support staff create opportunities for prolonged engagement or debriefing, therefore studies where these are limited may have research findings that lack comprehensiveness. The lack of financial compensation, particularly for participants that volunteer their time and efforts, may have also impacted the type and number of respiratory therapists that were recruited for this study. Perhaps if a monetary reward were offered, more individuals would be inspired to participate (Tracy, 2020).

7.6. Recommendations for Future Research

Future research should build on the findings of this study by drawing on the broader dataset from which this subset was derived. As previously mentioned, this thesis study is part of a larger overarching project conducted by Dr. Louise Chartrand. As this analysis represents only one portion of this larger, ongoing study, there is significant opportunity to further explore the experiences of respiratory therapists through alternative combinations of participants and comparative groupings.

Examining patterns across different participant characteristics may provide additional insight into how these factors shape the experience and meaning of terminal extubation. Such analyses involving years of experience, practice setting, or patient population served, would allow for a more nuanced understanding of variation within the profession and help to contextualize the findings presented here.

Furthermore, as depicted in Figure 3.0. *Participant selection for data collection and analysis*, both American and Canadian respiratory therapists were recruited through an open call for participants to be interviewed in the qualitative study. This thesis project purposively sampled from the total recruitment pool to select respiratory therapist from Manitoba, Canada, but the remainder

of the participant's interview data is still available for analysis in future studies. Future qualitative description studies could assess Canadian respiratory therapists overall, expanding the study from just Manitoban RTs. Additionally, studies could also compare Canadian RTs to American RTs and assess the differences in perceptions and experiences of COVID-19, which may be interesting due to the differences in healthcare system structure and social programming between Canada and the United States.

Dr. Louise Chartrand's study also conducted similar interviews of American and Canadian respiratory therapists prior to the COVID-19 pandemic, the data of which could be used to study comparisons with the data collected in this current study. Qualitative description studies could assess the data from Canadian respiratory therapists in comparison to before COVID-19 and after COVID-19. This comparison could also be applied to the American RT participants, looking at the themes and patterns in their experiences before and after the COVID-19 pandemic.

An ideal goal would be to be able to study Canadian and American respiratory therapy interview data both before and after the COVID-19 pandemic, perhaps in a qualitative interpretation study in order to better connect the individuals to a larger social or systemic processes and give researchers the ability to build conceptual frameworks around the evidence generated.

In bringing these findings together, this study underscores the importance of attending to the lived experiences of respiratory therapists, whose perspectives are often underrepresented in discussions of terminal extubation and withdrawal of mechanical ventilation. This study provides a platform for respiratory therapists to share their stories and experiences with a wider audience, and in turn, enable them to process these events in a cathartic and healing way. Giving voice to these accounts helps to acknowledge and validate all that they have endured in their professions, hopefully giving them the closure and support needed to move forward. In a healthcare system that continues to evolve in the aftermath of the COVID-19 pandemic, these insights remain highly

relevant. They underline the need to ensure that human dimensions of care are not overshadowed by operational procedures and demonstrate the value of qualitative inquiry in capturing the complexity of healthcare work in ways that quantitative approaches alone cannot.

7.7. Final Statement

This project has shown that respiratory therapists bore witness to some of the most fragile moments of human existence during the COVID-19 pandemic. I opened the introduction of this thesis with a quote that spoke of the universal beauty that flourishes despite the relentless constraints of time, death, and impermanence. I believe that what I've shared here reveals how meaning and dignity persist, even at the end of life. Within moments shaped by loss and finality, RTs helped create spaces of safety, support, and understanding. Their service affirms that, even in the face of death, there remains profound human significance in how life is tended to as it comes to pass.

As this thesis ends, I reflect on the respiratory therapy profession with an enlightened perspective. RTs stand at the threshold between life and its ending, providing care in moments defined by both grief and empathy. Especially during terminal extubations, where time narrows and certainty dissolves, their dedication proves that in the shadow of mortality, compassion endures. Their stories reveal that meaning is not diminished by life's fragility, but instead, is made visible *because* of it. These memories should remind us that how we care for each other, at *any* point of our journey, is in itself our most precious expression of our humanity.

References

Adeyemo, O., Tu, S., Falako, S., & Keene, D. (2022). Stressors on frontline healthcare workers during the COVID- 19 pandemic: A focus on moral injury and implications for the future. *International Archives of Occupational and Environmental Health, 95*, 1755-1762.

Allender, E., Bottema, S., Bosley, C., Holst, S., Clark, W., Weaver, A., . . . Finney, R. (2023). Use of the revised second victim experience and support tool to examine second victim experiences of respiratory therapists. *Respiratory Care, 68*(6), 749-759.

Alvarado, G., Hidalgo, J., Hidalgo, A., & Sinclair De Frias, J. (2023). *Principles of Mechanical Ventilation. In J. Hidalgo, R. Hyzy, A. Reda Taha, & Y. Tolba, Personalized Mechanical Ventilation: Improving quality of care.* Cham, Switzerland: Springer.

Anaraki, N., Mukhopadhyay, M., Karaivanov, Y., Wilson, M., & Asghari, S. (2022). Living and working in rural healthcare during the COVID-19 pandemic: A qualitative study of rural family physicians' lived experiences. *BMc Primary Care, 23*, 335.

Arregui-Gallego, B., Orts-Cortes, M., Moreno-Casbas, M., Abad-Corpa, E., Camacho-Bejarano, R., Cidoncha-Moreno, M., . . . Recas-Mart. (2025). Factors modulating the impact of the COVID-19 pandemic on posttraumatic stress symptomatology of Spanish healthcare workers: A cohort study. *PLOS ONE, 20*(6), e0323777.

Bagereka, P., Ameli, R., Sinaii, N., Vocci, M., Coulter, A., Neustedter, M., & Berger, A. (2025). Effects of a combined nature-based and audio-based virtual mindfulness intervention on stress and wellbeing of COVID-19 healthcare workers: A randomized controlled trial. *PeerJ, 13*, e19109.

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research, 15*(2), 219-234.

Bingham, A. (2023). From data management to actionable findings: A Live-phase process of qualitative data analysis. *International Journal of Qualitative Methods, 22*, 1-11.

Boissier, F., Seegers, V., Seguin, A., Legriel, S., Cariou, A., Jaber, S., . . . Philippon-Jouve, B. (2020). Assessing physicians' and nurses' experience of dying and death in the ICU: development of the CAESAR-P and the CAESAR-N instruments. *Critical Care, 24*, 521.

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research, 4*, 1-8.

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners.* London: SAGE.

Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide.* London: SAGE Publications.

Brown, C., Chartrand, L., Vollebregt, B., Kaur, D., Crawford, T., & Thille, P. (2024). Primary care occupational, physical, and respiratory therapy role adaptation in the first year of the COVID-19 pandemic. *BMC Primary Care, 25*(1), 3.

Canadian Institute for Health Information. (2022). *Impact of COVID-19 on Canada's health care systems: Hospital services*. Retrieved from CIHI Canada: https://www.cihi.ca/en/covid-19-resources/impact-of-covid-19-on-canadas-health-care-systems/hospital-services

Canadian Society of Respiratory Therapists. (2012). CSRT Position Statement: Degree as entry-to-practice. *Canadian Journal of Respiratory Therapist, 48*(3), 18-19.

Chartrand, L., Nguyen-Lu, T., Soliman, L., & Harder, N. (2026). Treatment withdrawal and distress: Recognising the need for better support in critical care—A scoping review. *Australian Critical Care, 39*(1), 101459.

Choi, H., Rodgers, S., Tocher, J., & Kang, S. (2022). Nurse's, physician's and family member's experiences of withholding or withdrawing life-sustaining treatment process in an intensive care unit. *Journal of Clinical Nursing, 00*, 1-16.

Clay, R. (2020). New guidance for protecting research participants. *Monitor on Psychology - American Psychological Association, 51*(6), 72.

Coates, A., Mihailescu, M., & Bourgeault, I. (2024). Emergency responses for a health workforce under pressure: Lessons learned from system responses to the Lirst wave of the pandemic in Canada. *The International Journal of Health Planning and Management, 39*(3), 906-916.

Colorafi, K., & Evans, B. (2016). Qualitative descriptive methods in health science research. *HERD: Health Environments Research & Design Journal, 9*(4), 16–25.

Cottereau, A., Robert, R., Le Gouge, A., Adda, M., Audibert, J., Barbler, F., . . . Ga. (2016). ICU physicians' and nurses' perceptions of terminal extubation and terminal weaning: A self-questionnaire study. *Intensive Care Medicine, 42*, 1248-1257.

Creswell , J., & Poth, C. (2018). *Qualitative inquiry and research design: Choosing among five approaches (4th ed.).* Thousand Oaks: SAGE Publications.

Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.).* Thousand Oaks: SAGE Publications.

Cullum, K., Madani, C., Cutler, E., & Reavis, K. (2022). The lived experience of respiratory therapists during withdrawal of advanced life-sustaining therapies at end of life in the ICU. *Respiratory Care, 67*(12), 1568-1577.

D'Alessandro-Lowe, A., Ritchie, K., Brown, A., Easterbrook, B., Xue, Y., Pichtikova, M., . . . M. (2023). Canadian respiratory therapists who considered leaving their clinical position experienced elevated moral distress and adverse psychological and functional outcomes during the COVID-19 pandemic. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice, 43*(10-11), 460-471.

De Boer, M., Reimer-Kirkman, S., & Sawatzky, R. (2022). How nurses' and physicians' emotions, psychosocial factors, and professional roles inLluence the end-of-life decision making process: An interpretive description study. *Intensive Critical Care Nursing, 71*, 103249.

Duong, S., Burtniak, J., Gretchen, A., Mai, A., Klassen, P., Wei, Y., . . . Stein, D. (2023). Riding high: Seroprevalence of SARS-CoV-2 after 4 pandemic waves in Manitoba, Canada, April 2020–February 2022. *BMC Public Health, 23*, 2420.

Evans, J., Sergenson, N., Dembinsky, M., Haahr, L., Bishop, J., Howells, A., . . . Price, L. (2024). Recruiting and retaining healthcare workers in Scotland to a longitudinal COVID-19 study: A descriptive analysis. *BMC Medical Research Methodology, 24*(1), 265.

Fink, J., & Cranor, J. (2016). *The great glowing coils of the universe: Welcome to Night Vale episodes, volume 2.* New York: Harper Perennial.

Franzosa, E., Kim, P., Moreines, L., McDonald, M., David, D., Boafo, J., . . . Aldridge, M. (2024). Navigating a "Good Death" During COVID-19: Understanding Real-Time End-of-Life Care Structures, Processes, and Outcomes Through Clinical Notes. *Gerontologist, 64*(10), 1-11.

Gale, N., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the framework method for the analysis of qualitative data in multi-discplinary health research. *BMC Medical Research Methodology, 13*, 117.

Gibney, N., Blackman, C., Gauthier, M., Fan, E., Fowler, R., Johnston, C., . . . Tanguay, T. (2022). COVID-19 pandemic: The impact on Canada's intensive care units. *FACETS, 7*(1), 1411-1472.

Gjessing, K., Steindal, S., & Kvande, M. (2023). Collaboration between nurses and doctors in the decision- making process when considering ending the life-prolonging treatment of intensive care patients. *Nursing Open, 10*, 306-315.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? *Field Methods, 18*(1), 59-82.

Jang, Y., You, M., Lee, H., Lee, M., Lee, Y., Han, J., & Oh, J. (2021). Burnout and peritraumatic distress of healthcare workers in the COVID-19 pandemic. *BMC Public Health, 21*, 2075.

Kanstrup, M., Singh, L., Leehr, E., Goransson, K., Pihlgren, S., Iyadurai, L., . . . Holmes, E. (2024). A guided single session intervention to reduce intrusive memories of work-related trauma: A

randomized controlled trial with healthcare workers in the COVID-19 pandemic. *BMC Medicine, 22*(1), 403.

Kaur, R., Geistkemper, A., Mitra, R., & Becker, E. (2023). RT education and COVID-19 pneumonia discharge quality. *Canadian Journal of Respiratory Therapy, 59*, 190-203.

Keyes, D. (1966). *Flowers for Algernon.* Harcourt: Brace & World.

Kisorio, L., & Langley, G. (2016). Intensive care nurses' experiences of end-of-life care. *Intensive and Critical Care Nursing, 33*, 30-38.

Kvale, S., & Brinkmann, S. (2015). *InterViews: Learning the craft of qualitative research interviewing (3rd ed.).* SAGE Publications.

Laurent, A., Bonnet, M., Capellier, G., Aslanian, P., & Herbert, P. (2017). Emotional impact of end-of-life decisions on professional relationships in the ICU: An obstacle to congeniality? *Critical Care Medicine, 45*(12), 2023-2030.

Litz, B., & Kerig, P. (2019). Introduction to the special issue on moral injury: Conceptual challenges, methodological issues, and clinical applications. *Journal of Traumatic Stress, 32*, 341-349.

Lonergan, B., Wright, A., Markham, R., & Machin, L. (2020). Time-limited trials: A qualitative study exploring the role of time in decision-making on the intensive care unit. *Clinical Ethics, 15*(1), 11-16.

Maduke, T., Dorroh, J., Bhat, A., Krvavac, A., & Regunath, H. (2021). Are we coping well with COVID-19?: A study on its psycho- social impact on front-line healthcare workers. *Missouri Medicine, 118*(1), 55-61.

Maxwell, J. (2013). *Qualitative research design: An interactive approach (3rd ed.).* SAGE Publications.

McAndrew, N., & Leske, J. (2015). A balancing act: Experiences of nurses and physicians when making end- of-life decisions in intensive care units. *Clinical Nursing Research, 24*(4), 357-374.

Meredith, L., Ahluwalia, S., Chen, P., Dong, L., Farmer, C., Bouskill, K., . . . Cassells, A. (2024). Testing an intervention to improve health care worker well-being during the COVID-19 pandemic: A cluster randomized clinical trial. *JAMA Network Open, 7*(4), e244192.

Miller, A., Roberts, K., Hinkson, C., Davis, G., Strickland, S., & Rehder, K. (2021b). Resilience and burnout resources in respiratory care departments. *Respiratory Care, 66*(5), 715-723.

Miller, A., Roberts, K., Smith, B., Burr, K., Hinkson, C., Hoerr, C., . . . Strickland, S. (2021a). Prevalence of Burnout Among Respiratory Therapists Amid the COVID-19 Pandemic. *Respiratory Care, 66*(11), 1639-1648.

Milo, R., Gomez, E., Suarez, C., Calero, P., & Connelly, C. (2023). Nurses and respiratory therapists lived experience during COVID-19 pandemic: A qualitative study. *SAGE Open Nursing, 9*, 1-10.

Moon, K., & Blackman, D. (2014). A guide to understanding social science research for natural scientists. *Conservation Biology, 28*, 1167-1177.

National Institutes of Health. (2016). *Guiding principles for ethical research. Retrieved from NIH Clinical Research Trials and You*. Retrieved from NIH: https://www.nih.gov/health-information/nih-clinical-research-trials- you/guiding-principles-ethical-research#:~:text=Respect%20for%20potential%20and%20enrolled%20participants,was%20learne d%20from%20the%20research

Nguyen, H., Duong, B., Vu, T., Lin, S., Susilawati, T., Nguyen, B., & Duong, M. (2025). Exploring the magnitude and predictors of the long-term psychological impact of COVID-19 on frontline healthcare workers in Vietnam: A multi-center, cross- sectional study. *BMC Health Services Research, 25*(1), 553.

Nowell, L., Norris, J., White, D., & Moules, N. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*(1), 1-13.

Oliffe, J., Kelly, M., Gonzalez-Montaner, G., & Yu Ko, W. (2021). Zoom Interviews: Benefits and Concessions. *International Journal of Qualitative Methods, 20*, 160940692110535.

Ong, K., Ting, K., & Chow, Y. (2017). The trajectory of experience of critical care nurses in providing end-of-life car: A qualitative descriptive study. *Journal of Clinical Nursing, 27*, 257-268.

Orr, S., Efstathiou, N., Baernholdt, M., & Vanderspank-Wright, B. (2022). ICU clinicians' experiences of terminal weaning and extubation. *Journal of Pain and Symptom Management, 63*(5), e521-e528.

Palma, A., Aliaga-Castillo, V., Bascunan, L., Rojas, V., Ihl, F., & Medel, J. (2022). An intensive care team reLlects on end-of-life experiences with patients and families in Chile. *American Journal of Critical Care, 31*(1), 24-32.

Patton, M. (2015). *Qualitative research & evaluation methods (4th ed.).* SAGE Publications.

Polit, D., & Beck, C. (2021). *Nursing research: Generating and assessing evidence for nursing practice (11th ed.).* Wolters Kluwer.

Queen's University Research Ethics Boards. (2023). *Navigating ethical practices for human participant research.* Kingston: Queen's University Ontario.

Riedel, P., Kreh, A., Kulcar, V., Lieber, A., & Juen, B. (2022). A scoping review of moral stressors, moral distress and moral injury in healthcare workers during COVID-19. *International Journal of Environmental Research and Public Health, 19*, 1666.

Riguzzi, M., & Gashi, S. (2021). Lessons from the Lirst wave of COVID-19: Work-related consequences, clinical knowledge, emotional distress, and safety-conscious behavior in healthcare workers in Switzerland. *Frontiers in Psychology, 12*, 628033.

Rizzi, D., Monaci, M., Gambini, G., Benzi, I., Perlini, S., De Silvestri, A., . . . Barone, L. (2025). A longitudinal RCT on the emectiveness of a psychological intervention for hospital healthcare workers during the COVID-19 pandemic: What we learned to date. *Journal of Clinical Psychology in Medical Settings, 32*(1), 27-38.

Roberts, K., Silvestri, J., Klaiman, T., Gutshe, J., Jablonski, J., Fuchs, B., . . . Mikkelsen, M. (2022). Well-being among respiratory therapists in an academic medical centre during the COVID-19 pandemic. *Respiratory Care, 67*(12), 1588-1596.

Ruple, C., Brodhead, J., Rabinovich, L., Junghaenel, D., Nakamura, T., Wong, J., . . . Siegel, S. (2024). Protocol of randomized-controlled trial to examine the emectiveness of three dimerent interventions to reduce healthcare provider burnout. *BMC Health Services Research, 24*(1), 1643.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health, 23*, 334-340.

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health, 33*(1), 77-84.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., . . . Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity, 52*, 1893-1907.

Sherman, J., & Petros, S. (2024). Disbelief, Distress, & Distrust: Trending Institution Related Emotional Distress During COVID-19. *Journal of Social Work in End-of-Life & Palliative Care, 20*(4), 352-373.

Shi, X., Xie, P., Zhou, Z., Zhao, Y., Luo, K., Liu, G., & Han, X. (2025). Work experiences, burnout, and psychological distress of frontline health professionals during the COVID-19 omicron epidemic: A multicenter cross-sectional study in Southern China. *Human Resources for Health, 23*(1), 62.

Skov, C., Østervang, C., Brabrand, M., Lassen, A., & Møller, T. (2024). How do sepsis survivors experience life after sepsis? A Danish qualitative study exploring factors of importance. *BMJ Open, 14*, e081558.

Slevitch, L. (2011). Qualitative and quantitative methodologies compared: Ontological and epistemological perspectives. *Journal of Quality Assurance in Hospitality & Tourism, 12*(1), 73-81.

Soto-Camara, R., Navalporto-Pascual, S., Matellan-Hernandez, M., Onrubia-Baticon, H., Garcia-Santa-Basilia, N., & Cardaba-Garcia, R. (2024). Consequences of the COVID-19 pandemic on the mental health of nurses in the Spanish out-of-hospital emergency service. *Enfermería Clínica (English Edition), 34*(4), 312-321.

Spirczak, A., Kaur, R., & Vines, D. (2022). Burnout among respiratory therapists during COVID-19 pandemic. *Canadian Journal of Respiratory Therapy, 58*, 191-198.

St. Ledger, U., Begley, A., Reid, J., Prior, L., McAuley, D., & Blackwood, B. (2013). Moral distress in end-of-life care in the intensive care unit. *Journal of Advanced Nursing, 69*(8), 1869-1880.

Stoewen, D. (2020). Moving from compassion fatigue to compassion resilience - Part 4: Signs and consequences of compassion fatigue. *The Canadian Veterinary Journal, 61*(11), 1207-1209.

Strickland, S., Roberts, K., Smith, B., Hoerr, C., Burr, K., Hinkson, C., . . . Miller, A. (2022). Burnout among respiratory therapists amid the COVID-19 pandemic. *Respiratory Care, 67*(12), 1578-1587.

Tracy, S. (2020). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact (2nd ed.).* Wiley-Blackwell.

Tratchenberg, S., Tehan, T., Shostak, S., Snydeman, C., Lewis, M., Romain, F., . . . Robinson, E. (2022). Experiences of moral distress in a COVID-19 intensive care unit: A qualitative study of nurses and respiratory therapists in the United States. *Nursing Inquiry, 30*, e12500.

Turner, J., Smith, L., & Jones, A. (2024). A qualitative analysis of health service problems and the strategies used to manage them in the COVID-19 pandemic. *BMC Health Services Research, 24*, 1067.

Ugwu, C., Ekere, J., & Onoh, C. (2021). Research paradigms and methodological choices in the research process. *Journal of Applied Information Science and Technology, 14*(2), 116-124.

Valiee, S., Negarandeh, R., & Nayeri, N. (2012). Exploration of Iranian intensive care nurses' experience of end- of-life care: A qualitative study. *Nursing in Critical Care, 17*(6), 309-315.

Varpio, L., O'Brien, B., Rees, C., Monrouxe, L., Ajjawi, R., & Paradis, E. (2021). The applicability of generalisability and bias to health professions education's research. *Med Educ, 55*(2), 167-173.

Wakelin, K., McAra-Couper, J., & Fleming, T. (2024). Using an online platform for conducting face-to-face interviews. *International Journal of Qualitative Methods, 23*, 1-12.

Wiegand, D., Cheon, J., & Netzer, G. (2019). Seeing the patient and family through: Nurses and physicians experiences with withdrawal of life-sustaining therapy in the ICU. *American Journal of Hospice and Palliative Medicine, 36*(1), 13-23.

Wintermann, G., Bornhorn, A., Steudte-Schmiedgen, S., Albus, C., Baranowski, A., Beschoner, P., . . . Weidner, K. (2025). The impact of informal caregiving on the mental health of health care workers during the COVID-19 pandemic: Cross-sectional and longitudinal results from the VOICE study. *Frontiers in Public Health, 13*, 1559518.

Wojnar-Gruszka, K., Miernik, M., Cichon, J., Liberacka-Lenart, D., Płaszewska-Żywko, L., & Potocka, M. (2025). Prevalence of the symptoms of post-traumatic stress disorder (PTSD) and burnout syndrome (BOS) among intensive care unit (ICU) healthcare workers during the COVID-19 pandemic. *Psychology, Health, & Medicine, 30*(4), 770-781.

Zhang, L., Zhang, K., Tong, L., Guo, Y., Shen, J., Zhang, X., & Yang, P. (2024). Anxiety, depression, social support, needs, and concerns of frontline nurses during COVID-19 peak infection period: A cross-sectional multicenter study. *Journal of Nursing Management, 2024*, 6007430.

Appendix A: Literature Review Summary

Literature Review Summary Table					
Citation	**Location & Population**	**Method**	**Objective(s)**	**Key findings**	**Recommendations**
(Adeyemo, Tu, Falako, & Keene, 2022)	United States, n=45 Physicians, nurses, respiratory therapists, physician's assistants	Qualitative, Semi-structured interviews	Explore stressors that HCWs experienced during 1st wave of pandemic Use identified initial stressors to inform practices and policies to support HCWs	3 main themes capture the stressors experienced 1. Stress from witnessing high number of deaths and impact on patients/families 2. Stress from changing work environment and unmet professional expectations 3. Concern for personal safety	Following COVID-19, It is important to monitor and evaluate for MI among HCWs Provide debriefing and counselling opportunities Study long-term impact of HCWs developing PTSD
(Arregui-Gallego, et al., 2025)	Spain, n=428 Physicians, nurses, geriatric carers, health care assistances	Quantitative, Surveys	Analyze the evolution of post-traumatic stress syndromes among HCWs during the COVID-19 pandemic. Identify HCWs at risk for developing symptoms related to PTSD, study the evolution of PTSD throughout COVID-19, provide information on how working conditions influenced these symptoms, and determine how HCW characteristics influenced their PTSS.	The predominant demographic participant in the study was a middle-aged female nurse, full-time employment in a fixed contract, hospital setting, with no COVID-19 infections and no high-risk factors. At baseline, women report higher PTSS scores, however these were not significant during the follow-up period. HCAs, geriatric carers, and nurses showed higher PTSS scores at baseline compared to physicians, although this was not seen in the follow-up period.	The study findings underscore the importance of early detection and targeted support for psychological well-being and coping strategies. Enhancing emotional regulation, preventing burnout, and addressing unhealthy coping behaviors may help reduce the long-term psychological impact on healthcare workers during public health crises.
(Bagereka, et al., 2025)	United States, n=78 Physicians, nurses, nurse practitioners, physician assistants, social workers	Quantitative, randomized controlled trial	To combine a nature-based program with audio-based mindfulness intervention to address stress and psychosocial-spiritual wellbeing. To evaluate the specific and combined effects of nature-based activities and mindfulness practices in the well-being of healthcare workers.	Nature-based virtual interventions were associated with improvements in overall well-being among COVID-19 healthcare workers. Adding audio-guided mindfulness elements appeared to enhance the positive effects of the nature-based program. The intervention did not produce a significant reduction in participants perceived stress levels. Due to limited statistical power the findings should be interpreted cautiously and warrant further research for confirmation.	Evidence from the study indicate that nature-based programs may help enhance overall well-being among healthcare workers during the COVID-19 pandemic. Incorporating audio-guided mindfulness practices into these programs could amplify their positive effects. However, these interventions may not significantly lower perceived stress levels for this population. Given the limited statistical power of the current study, additional research is needed to expand on these results.
(Boissier, et al., 2020)	France, n=815	Quantitative, mixed surveys	Develop and validate two tools designed to assess	2 factors result in decreased conflict: 1. Symptom control done jointly between physicians and nurses	Earlier consultation and integration of palliative care should be done in order to reduce

	Physicians, nurses		the experience of healthcare professionals.	2. Routine unit-level meetings This also resulted in better end-of-life care experiences for both professions. Better end-of-life care experiences were also due to - Absence of invasive care - Absence of surgery, chest tubes, or bronchoscopy - Absence of cardiopulmonary resuscitation - Absence of overaggressive treatment - Decisions to withhold treatment - Good communication with family members	prolonged suffering of patients and their family members. Additional studies with more adaptable scoring tools to accommodate subjective responses should be conducted.
(Choi, Rodgers, Tocher, & Kang, 2022)	South Korea, n=37 Physicians, nurses, family members	Qualitative, Semi-structured interviews	Exploring nurse, physician, and family member's experiences of the Withholding or Withdrawing Life-Sustaining Treatment (WWLT) process	Experiences fell under 4 themes: 1. Family member's power- Family value and Confucian familism were significant 2. Customer ideology – perception of patient as a customer and HCWs as purchased providers 3. Medical consideration – physician has a vital role in explaining treatment to family 4. Patient's dignity – fundamental purpose is to respect the death and dying of the patient Patient's opinion was more for the basic aspects of care rather than end-of-life decisions, family members were more impactful in the decision-making process.	Future studies should look at expanding study population to HCWs in locations other than the ICU. More research should focus on the role of nurses in providing end-of-life care and WWLT processes to dying patients.
(Cottereau, et al., 2016)	France, n=451 Physicians, nurses	Qualitative, closed-ended questionnaire	Identify perceptions associated with the preference of terminal weaning or terminal extubation when withdrawing mechanical ventilation.	A moral difference exists between withdrawing mechanical ventilation and withdrawing other life-sustaining therapies. Majority felt that ventilator cessation should only be considered as a last resort after all other options, ICU staff were uncertain about differences between terminal weaning and terminal extubation. While 2/5 of participants preferred either method, terminal extubation decreased the medicalization of death, decreased delay, avoiding false hope, and restoring patient appearance.	A protocol of terminal extubation may help improve acceptance and patient comfort. Future studies should assess the effects of terminal extubation and terminal weaning on patients and relatives.

(Cullum, Madani, Cutler, & Reavis, 2022)	United States, n=8 Respiratory therapists	Qualitative, semi-structured interviews	Investigate what lived experiences of hospital RTs were during withdrawing life-sustaining therapies at end-of-life. Discover the meaning and experience of withdrawing advanced life-sustaining therapies from the RT perspective.	Experiences fell into 3 major themes: 1. Impact of power relations: lack of involvement with care planning, lack of role appreciation, lack of opportunity for RTs to voice their concerns/opinions 2. Quality tools: RT education and role clarification needed, need better tools to communicate, provide support, educate the family/patient 3. Emotional involvement and exposure: physical act of withdrawing is difficult, deep ties are formed with some patients, RTs need better ways of coping with emotional toll	RTs should be present during daily rounds, pre-withdrawal huddles, and family conferences – integrated into care team. Interdisciplinary education for end-of-life care should be implemented for involved staff or be an essential competency for prelicensure education. For difficult cases, provide ethical rounds, group activities focused on group cohesion and resiliency, team debriefings, and strong management support.
(D'Alessandro-Lowe, et al., 2023)	Canada, n=213 Respiratory therapists	Quantitative, Surveys	Understand the impact of moral distress on respiratory therapists and its associated psychological and functional outcomes on consideration to leave a clinical position during the COVID-19 pandemic	Moral distress has resulted in one in four RTs considering leaving their jobs after elevated levels of stress and adverse psychological outcomes. Over half of respondents were positive for potential development of PTSD.	Following the COVID-19 pandemic, health care organizations should encourage self-screening for signs of mental illness and deteriorating mental health in their workers. Interventions to support moral distress should include rotating staff between low and high stress roles, promoting a supportive work culture, arranging rosters for shift workers, facilitating open discussions about challenges faced, and encouraging self-care.
(De Boer, Reimer-Kirkman, & Sawatzky, 2022)	Canada, n=9 Physicians, nurses	Qualitative, semi-structured interviews	Understand how nurses' and physicians' emotions, psychosocial factors, and professional roles influence end-of-life decision making in critical care.	Found 3 emerging themes: 1. Goal of avoiding futility is a shared mission 2. Decision making process has a lot of ambiguity 3. Other factors and subject variability Concerns stem from decreasing patient's quality of life and increasing suffering by using life-sustaining interventions. Decision-making process lacked structure and protocol, and factors such as individual philosophy, moral weightiness, and family receptiveness influenced end-of-life care.	Future research must acknowledge that individual philosophies impact end-of-life decision making more than what current literature depicts. Acknowledge that end-of-life decision making is a moral practice and that interprofessional insight as a shared experience is lacking in current literature. Since family receptiveness is the most significant psychosocial factor, clinicians should be given clearer direction as how to navigate "negotiating consensus" between the family and team.

(Gjessing, Steindal, & Kvande, 2023)	Norway, n=8 Physicians, nurses	Qualitative, Semi-structured interviews Physicians, nurses	Explore nurse and physician experiences about collaboration when considering withdrawing life support.	Positive experiences involved communicating during decision-making process, being a united team, including the nurse's opinion in the decision-making process, discussing various views about patients.	Should continue to facilitate regular discussion of prognostic plans, regular team meetings, setting care directives early in patient trajectory.
(Jang, et al., 2021)	South Korea, n=1068 Physicians, nurses, public health officers	Quantitative, online survey	Examination of psychological impacts of COVID-19 on HCWs in response to the pandemic Identifying methods to alleviate adverse outcomes	Burnout was experienced highest in nurses due to emotional exhaustion, high risk workplaces, and continuous COVID-19 tasks. Traumatic distress was experienced highest in public health centres among all staff. First line medical workers do not always have higher psychological distress than other workers. Workplace difficulties such as insufficient break time, safety concerns, and long-term workloads were a source of psychological distress in HCWs.	Following COVID-19, there needs to be more attention to mental health wellbeing for nurses Supports should be in place to provide rest time, safety training and education, and psychological resources for all HCWs regardless of job type. Mindfulness practices and spiritual programs should be readily available to provide positive psychology therapy. Health institutions need to provide sufficient training and exercises in awareness of mobile health tools, telephone helplines, or digital learning packages. Mandatory occupational health surveillance programs should have psychological supports implemented into their operating framework.

(Kanstrup, et al., 2024)	Sweden, n=164 Physicians, nurses, nurse assistants, ambulance workers, physical therapists, other (unspecified)	Quantitative, Randomized controlled trial	To develop complementary approaches to existing interventions aimed at accessing treatment for post-traumatic stress disorder for healthcare workers during the COVID-19 pandemic. To test new variations of psychological treatments for trauma such as: • Single symptom approach • Subclinical-to-clinical sample • Preventing-to-treating approach • Brief repeatable approach • Mechanistically informed intervention development driven by neuroscientific models of memory updating • Targeting perceptual processing • A digital approach that consists of one-guided session that can be scaled Tailored to treat intrusive memories following trauma, *not* PTSD	The guided single-session intervention significantly reduced the number of intrusive memories compared to the control group at 5 weeks, with a strong treatment effect. Participants who received the intervention also experienced reductions in post-traumatic stress-related symptoms, with benefits maintained at the 1-month, 3-month, and 6-month follow-ups. The intervention demonstrated high adherence and low dropout rates, showing its feasibility and acceptability for HCWs during the pandemic. The approach was found to be safe and scalable, suggesting it could be widely implemented as a brief, digital, early intervention for trauma-related symptoms.	Implement brief, early interventions to address intrusive memories before they develop into more persistent trauma-related symptoms. Integrate scalable, low-intensity digital tools into healthcare systems to support workers' mental health, especially during high-demand periods like pandemics. Provide accessible and flexible mental health support that can be completed within minimal time burdens, increasing uptake among busy HCWs. Further research is needed for real-world implementation plans to confirm effectiveness across diverse settings and refine the intervention for further use.
(Kisorio & Langley, 2016)	South Africa, n=24 Nurses	Qualitative, Focus groups	Exploring experiences with end-of-life care that can inform development of interventions and provisions of future care.	Experiences fell into 5 major themes: 1. Difficulties nurses experience, included psychological and emotional stress, conflicts on whether to tell family or not, and dealing with communicating difficult messages 2. Discussions on decision-making, included being on the same page, and lacking involvement 3. Patient support, included spiritual services, presence, noise, and letting nature take its course 4. Family support, included open access, preparation, staying with the patient, and having a support person ready	Nurses would like more involvement in decision making. More spiritual support for patient and family. Suggested training to support nurses in coping with challenges in caring process, especially since many participants reported that nurses, especially junior ones, may not have adequate end-of-life care training. Furthermore, nurses should be able to opt out of caring for terminal patients if they

				5. Nurse support, included teamwork, training, getting time to adjust, undergoing shift changes, and having someone to talk to	experience personal issues that may find them difficult to do so. Debriefing sessions before and after end-of-life care should be standard.
(Laurent, Bonnet, Capellier, Aslanian, & Herbert, 2017)	Canada, n=20 Physicians, nurses	Qualitative, Clinical interviews	Identifying nurse and physician experiences of end-of-life decisions and to better understand how emotional dimensions influence end-of-life care.	On the decision-making process, nurses felt that they were not adequately involved, lacked understanding of the plan, and therapeutic obstinacy, while physicians felt more affected by the responsibility and difficulty in making the decisions. On the impact of care relationships, nurses felt the need to humanize their patient interactions, defend their patient's wishes, and support them if needed, while physicians identified more with the family and their wishes and expectations. On the impact of professional relationships, nurses felt they had a lack of recognition and had to be submissive to physician's authority, while physicians felt they were under pressure to make decisions and had to quickly come to consensus w/nurses.	Nurses' dissatisfaction was mainly linked to the absence of the decision to withdraw treatment altogether, resulting in them submitting to a futile treatment plan that did more harm than good to their patients. Implementing steps in the end-of-life protocol that maintains nurses' professional identity would help improve experiences.
(Lonergan, Wright, Markham, & Machin, 2020)	United Kingdom, n=18 Physicians, nurses	Qualitative, Semi-structured interviews	Explore the role of time in intensive care units and how it contributes to ongoing debates regarding time-limited trials.	Uncertainty stems from reversibility of some diseases and the patient's response to treatments, meaning that the urgency of their decision-making was done with seemingly inadequate information. Therefore, waiting for an unspecified period to observe any responses was typically chosen over early palliation. Time also helps physicians understand their patient, the patient's family, and the disease process, while also strengthening relationships with staff members. Time was also seen as a "gift" given to families that enabled them to process what was happening and provide compassion for their experiences. Conflicts between staff and family typically surrounded conducting treatment withdrawal, so having time to construct an evidence-base to support decision-making	Time-limited trials could be implemented into hospital procedure as they maximize the chances of recovery for patients and help the family emotionally adjust to the situation. Since findings highlight that discussing and initiating end-of-life care is still difficult for staff, future research could investigate how TLTs help avoid conflict and formulate an agreement between staff and family members.

				and present to family helped with communication and acceptance of the plan.	
(Maduke, Dorroh, Bhat, Krvavac, & Regunath, 2021)	United States, n=370 Physicians, residents, fellows, nurses, nurse practitioners/physician's assistants, respiratory therapist, physical therapist, occupational therapist, social worker, dietician	Quantitative, Surveys	Evaluate the impact of COVID-19 on healthcare workers and their residency and fellowship training programs. Understand the psychosocial impact of the pandemic across all frontline workers in a hospital system.	Majority experienced increased anxiety, feeling overwhelmed, and a fear of death. Female workers reported higher levels of anxiety, were more overwhelmed, and suffered sleep disturbances. Residents and fellows experienced negative effects on their education and training, regardless of if they were receiving support from their program.	Following the CO VID-19 pandemic, future disaster planning should have core components that involve healthcare provider well-being.
(McAndrew & Leske, 2015)	United States, n=11 Physicians, nurses	Qualitative, Interviews	Understand the perspectives and experiences that nurses and physicians have with end-of-life decision making.	Decision making was a balancing act between 3 components: Emotional responsiveness – with occur as it effects personal emotions, difficulty with continuing to separate professional and personal feelings Roles and responsibility – both workers identify with advocating for patient, but nurses also feel they advocate for the family too, are usually tasked with speaking to family Team Collaborating – for nurses, this meant having a clear goal in mind for patient care for physicians, it was more to have a clear message for family. Problems with communication also happen at handoff or transfer.	Recommendations included development of support interventions for nurses and physicians that are involved with end-of-life care. Interventions should include intentional communication and collaboration team exercises.
(Meredith, et al., 2024)	United States, n=2077 Physicians, nurses, nurse practitioners, physician assistants, respiratory therapists	Quantitative, clustered randomized clinical trial	"Stress First Aid" is an evidence-informed intervention aimed at mitigating the psychosocial effects of COVID-19 on HCWs. This study aims at evaluating the effectiveness of tailored peer-to-peer support interventions, in comparison to usual care provided to HCWs at hospitals and American federally qualified health centers during the COVID-19 pandemic. `	The peer-to-peer "Stress First Aid" intervention did not show any significant improvement to overall well-being outcomes compared to usual care among the study population. The intervention showed a protective effect against psychological distress and PTSD symptoms in settings where it was implemented with higher adherence. Implementation quality is a major factor in adoption and delivery at sites, who saw better mental health outcomes than sites that had lower uptake and administration. Subgroup analyses showed that younger healthcare workers may have experienced	Ensuring that interventions have a strong implementation program and participant uptake will improve effectiveness, consistency, and delivery of these programs across sites. Incorporating peer-support models into healthcare settings are beneficial, but only successful if staff are properly trained and supported to use them effectively. Interventions should be tailored to specific groups or higher-risk staff since the study showed greater benefits for subgroups rather than

				greater benefits, such as reduced distress and improved resilience.	the entirety of the sample population. Combining individual-level supports with organizational strategies will more effectively improve overall well-being and reduce distress.
(Miller, et al., 2021a)	United States, n=1,114 Respiratory Therapists	Quantitative, Survey	Identify the prevalence of burnout among respiratory therapists and the factors associated with burnout.	Majority of participants (79%) reported burnout that related to: - Working more hours per week - Working more hours in the ICU - Caring for adult patients - Delivered care via protocol - Inadequate staffing - Being unable to complete work - Had more exposure to COVID-19 - Had a low leadership score Factors that influenced a higher risk of burnout included inadequate RT staffing, inability to complete all work, and missing work for any reason. Not providing patient care and positive leadership experiences helped decrease the risk of burnout.	RT leaders should implement department rounding regularly to provide useful and positive feedback for frontline staff. Provide support for workers by listening to their concerns, implementing their suggestions, and promoting staff engagement in decision-marking for the department.
(Miller A. , et al., 2021b)	United States, n=221 Respiratory therapists	Quantitative, Surveys	Determine what resilience and burnout resources are available in respiratory therapy departments. Investigate burnout rates in respiratory therapists before and after the COVID-19 pandemic.	Majority of respiratory therapists experienced burnout, but only a few departments had burnout or resilience tools available. Free employee assistant or wellness programs were available in departments that did provide services. Burnout drivers were identified as poor leadership, poor staffing, and high workloads. There was an increased level of burnout after the pandemic.	Following the COVID-19 pandemic, RT leaders need to evaluate staffing and workloads. Decreasing RT intentions to leave work positions is vital and can be done through reducing unnecessary therapies and eliminating non-evidence based practices. Future research still needs to evaluate true burnout rates and effects on RT well-being and quality of patient care.
(Milo, Gomez, Suarez, Calero, & Connelly, 2023)	United States, n=13 Nurses, respiratory therapists	Qualitative, Semi-structured interviews	Understand nurses' and respiratory therapists' experiences during the COVID-19 pandemic	6 areas of focus emerged: 1. Work-life experiences before COVID-19 2. Work-life experience during COVID-19 3. Personal life experience during COVID-19 4. The Coping Period 5. The Professional Role Change	Following the COVID-10 pandemic, the participants of this research study had similar age, education, and employment status, so future research is needed to assess other population demographics.

				6. Work and personal life experiences after COVID-19 Participants reported enjoying their pre-pandemic work, which was impacted due to the burnout, secondary stress, and moral distress caused by the COVID-19 pandemic.	
(Nguyen, et al., 2025)	Vietnam, n=462 Physicians, nurses, nurse aides, other (not specified)	Quantitative, cross-sectional surveys	This study investigated the extent of psychological distress among frontline healthcare workers during the transition to the "new normal" phase of COVID-19 and identified factors that predicted these outcomes.	A high proportion of frontline HCWs reported psychological distress with most experiencing overall distress and substantial rates of moderate-to-severe depression, anxiety, and insomnia, after COVID-19. Most HCWs reported good or excellent mental health before deployment but showed a marked decline during deployment and then remained reduced during the study. Physical and mental health conditions prior to deployment were associated with higher odds of moderate-to-severe depression and anxiety. Deployment during the 3rd and 4th COVID-19 waves increased the risk of long-term depression, while field hospital locations and deployment status increased risk of insomnia.	During and following high-intensity deployment periods, implementing ongoing mental health support for frontline HCWs can mitigate long-term distress. Staff that have pre-existing physical or mental health conditions should be identified and have targeted interventions provided since they are at a higher risk of depression, anxiety, and insomnia. Enhancing preparedness and support during future public health crises to reduce stress and burnout, particularly in relation to workload management and adequate staffing. Integrate mental health monitoring and early intervention programs within healthcare settings, particularly in field hospitals or high-risk units in order to detect psychological issues that arise.
(Ong, Ting, & Chow, 2017)	Singapore, n=10 Nurses	Qualitative, semi-structured interviews	Studying the perceptions of critical care nurses had towards providing end-of-life care.	There was a "trajectory of experience" that occurred, with 4 components: Culture of care – maximum support was the main goal and end-of-life care was only considered after all other options. Family was more likely to use hope as a reason to be unaccepting of death and to continue treatment. Tension – A lack of autonomy stemmed from power imbalances with physicians,	Recommendations for clinical practice included integrating nurses and their experiences (awareness of suffering, patient quality of life, interactions with family members) into protocols. Recommendations for policy included empowering nurses to initiate conversations about end-of-life care and implementing strategies to enhance coping.

				limiting the ability to participate in care planning. Meaning of life and death – emotional discomfort from witnessing patient suffering, with grief and relief surrounding death Coming to terms – goal became to resolve tension experienced from other components despite being mentally and emotionally taxing	Recommendations for future research included determining the generalizability of the "trajectory of care" and identifying other characteristics of the culture of care and factors that influence tension.
(Orr, Efstathiou, Baernholdt, & Vanderspank-Wright, 2022)	United States, n=20 Physicians, nurses, nurse practitioners, respiratory therapist, physician's assistant	Qualitative, semi-structured interviews	Explore clinicians' experiences of terminal weaning of mechanical ventilation and extubation, to better understand the process, decision communication, and decision impact.	Data analysis resulted in 4 themes: 1. Fine-tuning processes – steps related to withdrawing life-sustaining therapies are still ambiguous and are mostly guided by experience 2. Focusing on family – involvement helps promote quality care and helps meet family's needs 3. Ensuring patient-centered care 4. Impact on clinicians – include team meetings focused on actualizing a care plan and ensuring all are involved	Recommendations include involving family members more in the patient care and share decision-making steps regarding withdrawing or withholding care. Future attempts to include social work and chaplaincy in the process – should be available for support even if they are not directly involved in withdrawal.
(Palma, et al., 2022)	Chile, n=28 Physicians, nurses, nurse assistants	Qualitative, focus groups	Explore experience and perspectives of a care team regarding the end-of-life care of their patients.	Main barriers to carrying out end-of-life care were: - Cultural difficulties related to decision-making - Lack of interprofessional clinical practice - Lack of effective communication Challenges were found in areas of decision-making, communication, and emotional impact.	Guidelines on maintain family-centered care through effective communication training for staff and use of structured approaches were recommended.
(Riguzzi & Gashi, 2021)	Switzerland, n=40 Healthcare workers	Quantitative, Cross-sectional survey	Identifying psycho-social factors that affect mental wellbeing and work capacity	Majority of healthcare workers overestimated standard hygiene practices as sufficient protection Majority felt additional info was not needed to work, and public television was the preferred method of information delivery Emotional distress caused by potential infection of family, deaths of elderly adults, and lack of government and healthcare preparation for pandemic	Following COVID-19, there should be increased and improved levels of equipment and drugs available Increased protections to mental and physical health More personnel should be available during pandemic, and providing increased hourly wages for the workload

					More detailed info about disease symptoms must be available, and a way to warn hospitals to prepare rooms
(Rizzi, et al., 2025)	Italy, n=225 Physicians, nurses, social workers	Quantitative, randomized controlled trial	To explore the longitudinal effects of trauma-related symptoms and behaviors in frontline workers during the 2nd COVID wave and the time following. To assess the efficacy of intervention verses non-intervention psychological conditions on trauma symptoms of HCWs, accounting for gender and professional occupations.	Trauma-related symptoms naturally decreased over a 12-month period for all participants regardless of intervention status. The brief dialectical behavior-informed therapeutic intervention did not lead to significantly greater reductions in trauma-related symptoms compared to the no intervention group. For healthcare workers with severe PTSD-symptoms at baseline, those that received the intervention experienced a greater reduction in distress compared to the control. There were no significant differences in trauma-related symptom alleviation between the in-person and online delivery formats, however females reported higher trauma-related symptoms than males did, regardless of professional role.	Healthcare workers that have severe baseline trauma should be prioritized for targeted psychological support interventions. Since both in-person and online delivery formats were similarly effective and accessible, both should be offered to increase program flexibility. Implementation of ongoing monitoring of mental health among healthcare workers is critical, as well as early identification of high risk individuals and support of natural recovery. Combine individual-level interventions with organizational support to maximize overall effectiveness of reducing trauma-related distress.
(Roberts, et al., 2022)	United States, n=108 Respiratory therapists	Mixed methods, Semi-structured interviews & surveys	Identify rates and determinants of well-being, burnout, and professional fulfillment among respiratory therapists during the COVID-19 pandemic.	Staffing challenges, safety concerns, workplace conflict, and lack of work-life balance led to burnout. Professional fulfilment was related to patient care	Following the COVID-19 pandemic, it is important for institutions to implement surveillance programs to assess RT wellness. Ensure there is an engaged leadership that is aware and supportive of the RT experience and appreciate their role in the interdisciplinary team. Institutions need to have interventions focused on scheduling and team building.
(Ruple, et al., 2024)	United States, n=445 Healthcare workers* *Not specified, but must be credentialed as one of the following: medical doctor, physician assistant, nurse practitioner,	Quantitative, randomized controlled trial	To investigate the effectiveness of three different burnout interventions that seek to improve provider wellbeing and performance	Reducing healthcare provider burnout can be evaluated through the implementation of different intervention programs such as emotional wellbeing and resilience training, Electronic Health Record skills training, and performance improvement training.	Implement multi-component interventions that target both emotional well-being and practical skills to reduce burnout. Tailor interventions to diverse healthcare roles to address

	Doctor of Philosophy (clinical), Master of Science (clinical), licensed vocational nurse, licensed practical nurse, physical therapist, respiratory therapist, occupational therapist, speech and language therapist		in a healthcare setting, within a hospital system. To contribute to and extend prior literature by using randomized controlled trials to assess how effective different types of interventions are when aimed at decreasing mental distress, increasing self-efficacy, and creating sustainable improvements.	This study is designed to assess changes in burnout, emotional health, intent to leave, EHR mastery, and confidence in performance improvement at post-intervention and after a 6-month follow-up.	burnout drivers that occur across different professional groups. Evaluate interventions using rigorous, longitudinal methods that include pre-intervention and post-intervention assessments and follow-up in order to identify sustainable strategies. Integrate both individual and system-level supports for emotional resilience and workflow improvements, rather than only personal coping strategies.
(Sherman & Petros, 2024)	United States, n=110 Physicians, nurses, nurse practitioners, social workers, other (chaplain, pharmacist, counselor, home health aide, etc.)	Mixed-methods, statistical analysis and open-ended surveys	To expand on existing research related to moral distress to understand the impact on interdisciplinary hospice and palliative team. To obtain quantitative and qualitative data for the purpose of identifying themes or moral distress and provide future recommendations for improved intervention.	Palliative and hospice healthcare professionals had high levels of moral and emotional distress related to institutional policies and pandemic-related restrictions. Major sources of emotional distress were institutional distrust and disbelief in management decisions, such as resource allocations and safety protocols. Periods where staff felt unsupported or under-resourced during increased workload and high-risk situations exacerbated levels of distress. Thematic analysis showed patterns of support system importance and transparent communication from leadership to mitigate distress and improve professional well-being.	To build trust and reduce uncertainty among healthcare staff, leadership should enhance transparency and promote consistent communication. To help mitigate moral distress and work-related distress, targeted institutional supports such as adequate resources, staffing, and PPE, should be provided. Implementing structured emotional and mental health support programs during high-intensity periods help increase the effectiveness of counseling, peer support, or debrief sessions. Engaging the staff in decision-making processes to foster a sense of agency will help in reducing feelings of disbelief or frustration with organizational policies.
(Shi, et al., 2025)	China, n=3158 Physicians, nurses, health technicians	Quantitative, cross-sectional survey	To investigate how pandemic-related job stressors that occurred during the 2022 Omicron COVID-19 transmission wave impacted the mental health of frontline healthcare workers. To identify which work arrangements were	During the Omicron transmission wave, 85.5% of frontline workers reported high levels of burnout. Half of the participants experienced significant psychological distress symptoms such as depression, anxiety, and stress. Work arrangements such as extended working days were linked to worsened mental health outcomes like emotional	To reduce burnout and psychological distress, work schedules should be optimized to reduce excessive workloads, long shifts, and frequent high-risk assignments. Providing psychological support services such as counselling, stress management programs, and peer

			sustainable in improving psychological support and workforce resilience. To inform the institutional policies that direct effectiveness of epidemic control and HCW health and well-being.	exhaustion, depersonalization, depression, and anxiety. Negative emotions during work and dissatisfaction with work arrangements were also significantly associated with both increased burnout and psychological distress.	support networks can help staff cope with emotional strain. Enhancing communication and transparency in work arrangements will help ensure staff understand their roles, rotations, and safety measures to reduce uncertainty and negative emotions. Offering targeted interventions for high-risk groups will help prevent long-term mental health consequences.
(Soto-Camara, et al., 2024)	Spain, n-474 Nurses	Quantitative, online questionnaire	To analyze the impact of the COVID-19 pandemic on the mental health of emergency medical service nurses and identity predictors for greater severity.	Participants reported a high prevalence of psychological distress, with 32.9% reporting severe or extremely severe depression, 32.7% reporting severe or extremely severe anxiety, and 26.3% reporting severe or extremely severe stress. Nurses that had fewer skills to handle stress, had psychotropic drugs or psychotherapy before the pandemic, or experienced changes in working conditions were more likely to report severe psychological symptoms. Lower self-efficacy, younger age, and less work experience were associated with higher levels of depression, anxiety, and stress, which indicates that confidence and experience play protective roles. Modifications to working conditions during the pandemic were significant predictors of increased likelihood of severe depression and anxiety among nurses.	Implementing targeted mental health support programs for nurses should include counselling, stress management training, and access to psychotherapy. Providing training to improve coping skills and self-efficacy can help nurses manage stress more effectively during high-pressure situations. Minimizing abrupt or frequent changes in work conditions can ensure clear communication during role assignments, which will help reduce anxiety and depression. Prioritizing support for younger and less experienced nurses that includes mentoring, peer support, and resilience-building interventions, is important as they are more prone to severe psychological distress.

(Spirczak, Kaur, & Vines, 2022)	United States, n=218 Respiratory therapists	Quantitative, Surveys	Determine the prevalence of compassion satisfaction or fatigue among respiratory therapists during the COVID-19 pandemic.	More than half of respondents reported moderate compassion fatigue during COVID-19. Increased compassion fatigue was related to factors such as: - Younger age - Low level of education - Staff therapist position - Primary job in critical care - Less work experience - Low team collaboration - Organization does little to help manage stress Job satisfaction was related to financial compensation and increased education levels.	Following the COVID-19 pandemic, strategies to identify effective leadership changes is needed. Stress management programs, coping programs, education opportunities, and safe working environments are crucial for future work success among RTs.
(St. Ledger, et al., 2013)	Northern Ireland, n=36* Physicians, nurses, patient's relatives	Qualitative, In-depth interviews	Explore experiences of moral distress in relatives and healthcare professionals involved in end-of-life care decisions. Identify the causes of moral distress and the relationships among them.	Moral distress can result in negative impacts and long-term consequences, so explaining end-of-life care in decision-making situations will enhance communication and care delivery for patients and families at the end of life.	Improve communication and inclusion in end-of-life decision-making – moral distress increased when HCWs felt excluded from processes, improving communication would reduce feelings of powerlessness and ethical conflict. Provide education and organizational support for managing moral distress – education, debriefing sessions and institutional supports can help clinicians process difficult situations. This should include ethics training or support services.
(Strickland, et al., 2022)	United States, n=1,114 Respiratory therapists	Qualitative, Survey	Understand the factors related to burnout as experienced by respiratory therapists during the COVID-19 pandemic.	Reported burnout stressors were: - Anxiety, depression, and compassion fatigue - Lack of adequate staffing - High workload levels - Inadequate leadership support Analysis generated 5 main sources: 1. Staffing 2. Workload 3. Physical/emotional consequences 4. Lack of effective leadership 5. Lack of respect	Following the COVID-19 pandemic, more research into the interventions that effectively prevent or alleviate burnout is needed.

(Tratchenberg, et al., 2022)	United States, n=20 Nurses, respiratory therapists	Qualitative, Semi-structured interviews	Explore the experiences of nurses and respiratory therapists related to staffing models and changes that occurred during COVID-19. Explore the effect moral distress had on frontline workers during the pandemic.	Experiences fell into 5 categories: 1. Fear of the unknown 2. Concerns about infection 3. Professional unpreparedness 4. Isolation and alienation 5. Inescapable stress/distress Moral distress stemmed from the fear of infection risk, challenges of clinical practice during COVID-19, and the pervasiveness of the disease outside of the hospital.	Following the COVID-19 pandemic, more empirical research on moral distress, including its scope and parameters, is needed. Interventions need to be designed with active listening, RT recognition, and acknowledging experiences in mind, especially to reduce stress.
(Valiee, Negarandeh, & Nayeri, 2012)	Iran, n=10 Nurses	Qualitative, In-depth interviews	Explore the experiences of intensive care nurses providing care for end-of-life patients. Explore the impact providing such care has on nurses in order to develop effective coping strategies.	Experiences fell into 2 themes: 1. Emotional Burden, includes psychological pressure of providing care, family's reaction, and effect of patient's condition 2. Value and Beliefs, including being an advocate for the patient, and belief in the hereafter The sociocultural and religious context of participants affected their opinions on life, death, and the decisions with end-of-life care.	Further research is needed to understand the notion that, despite the condition of the patient to seem hopeless, some nurses will still follow actions determined by their own view, Specialized training should be given to nurses to manage the emotional burden of their work, help them communicate with family, and be able to provide family with support.
(Wiegand, Cheon, & Netzer, 2019)	United States, n=10 Physicians, nurses	Qualitative, Semi-structured interviews	Explore and describe the experience of nurses and physicians participating in withdrawal of life-sustaining therapies.	Communicating about life-support therapies and caring for both patients and families is a vital skill to develop. The interdisciplinary team must work closely together to identify ethical issues and to continue to advocate for the patient and family. Inherent challenges include unclear prognosis in critically ill cases and labile illness trajectories that ultimately came to a point where decisions regarding continuing or stopping treatment were needed. Both professions felt a commitment to support the patient and family throughout the entire process from admission to the end of the dying process. Both held important responsibilities with preparing and educating families on the experience.	Most expertise was developed through their profession, so future healthcare providers should be trained and educated on end-of-life care prior to practice rather than rely on lived experiences. Recommendations for methods to help prepare family included breathing sounds, varying levels of consciousness, and possible spastic movements.

(Wintermann, et al., 2025)	Germany, n=21, 129 Physicians, nurses, medical technical assistants (various)	Quantitative, surveys	To analyze the intensity, rate, and evolution of the risk factors and protective resources related to psychological distress amongst HCWs across set time periods	HCWs that had informal caregiving responsibilities had higher levels of anxiety and depression in comparison to HCWs that had no caregiving duties, especially during the early phases of the pandemic. Informal caregiving was identified as a significant longitudinal risk for psychological distress regardless of participant demographics and occupation. Differences in distress between caregivers and non-caregivers was most prominent in the early stages of the pandemic but decreased over time. Psychological factors such as optimism had a protective effect, but this diminished as HCWs began to worry about transmitting the disease to their own families.	Providing targeted mental health supports for HCWs with informal caregiving responsibilities, especially during crisis periods, is important in mitigating anxiety and depression. Flexible work arrangements and organizational supports, such as adjusted schedules and leave-of-absence options) can help workers balance professional duties with caregiving demands. Early intervention strategies during high stress periods should be implemented during initial crisis phases of public health emergencies. Efforts to address fears related to infecting family members by ensuring adequate protective measures, clear communication, and psychological support can reduce anxiety and enhance resilience.
(Wojnar-Gruszka, et al., 2025)	Poland, n=148 Physicians, nurses, nursing aides, paramedics	Quantitative, surveys	To assess the occurrence of post-traumatic stress disorder and burnout syndrome among intensive care unit healthcare workers two years after the start of the COVID-19 pandemic.	Nearly half of the ICU workers in this study reported significant PTSD symptoms indicating a substantial psychological impact of the pandemic. Moderate levels of burnout were common, especially in relation to emotional exhaustion and disengagement or lack of commitment. PTSD and burnout were strongly associated to higher levels of exhaustion and withdrawal and were linked to more severe PTSD symptoms. Work-related stressors were major contributors to psychological strain and differences were observed between temporary and general ICU settings.	Implementing regular mental health screening and early intervention for ICU workers can detect and address PTSD and burnout symptoms quickly. Reducing workload and fatigue through organizational changes, such as adequate staffing, reasonable shift scheduling, and rest periods, can minimize emotional exhaustion. Targeted psychological support services, such as counselling and stress management are beneficial for high-risk ICU workers. Improving working conditions in high-intensity settings through ensuring proper resources and training can reduce disengagement and psychological strain.

(Zhang, et al., 2024)	China, n=4128 Nurses	Quantitative, surveys	To investigate the mental health conditions of frontline nurses during the COVID-19 pandemic's peak infection periods. To create a framework for HCW social and psychological support interventions.	During peak infection periods, frontline nurses experienced notable levels of anxiety and depression. Nurses with higher support reported lower levels of anxiety and depression, showing an inverse relationship between social supports and psychological distress. Occupational and demographic factors such as professional title, education level, and living situation, were significantly associated with differences in mental health outcomes. Fears regarding infection risk, workload pressures, desire for better support systems, and insufficient resources were among the most reported concerns by nurses during the pandemic peak periods.	Since high support is linked to lower anxiety and depression, social supports should be reinforced in social systems, such as peer support networks, family connections, and organizational initiatives. Psychological supports such as counselling and stress management programs can help mitigate anxiety and depression among frontline nurses. Nurses' practical needs can be directly targeted and rectified, such as ensuring adequate PPE, managing workloads, and providing safe working conditions. At-risk groups such as early-career staff or those with limited support systems, should have specialized interventions implemented into their institution.

Appendix B: Informed Participant Consent Form

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RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM
Individual Interview

Title of Study: "Performing Terminal Extubation: Experiences of Respiratory Therapists"

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You are being asked to participate in a research study involving an interview. Please take your time to review this consent form and discuss any questions you may have with the study staff, your friends or family before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain any words or information that you do not clearly understand.

Purpose of this Study
This research study has the following objectives:
- Describe how respiratory therapists perceive their role in terminal extubation
- Describe the emotional impact of withdrawing ventilatory support on respiratory therapists
- Describe what could be done to help with emotional distress
- Describe how COVID-19 impacted the process of terminal extubation and ventilator withdrawal, and whether RT experiences have changed from this

Participants Selection
You are being asked to participate in this study because you are a respiratory therapist that has withdrawn life support at one point in your career.

A total of *15* participants will be asked to participate.

Study procedures
- The method of data collection is an individual phone interview. Interviews are a way of finding out people's thoughts and ideas about a specific topic.
- Participation in the study will be for one session that will last about one hour.
- The interview will be conducted by the principal investigator Louise Chartrand or the research assistant Lea Soliman.
- During the interview, you will be asked some questions related to your role and responsibility in withdrawing mechanical ventilation.

- The session will be audio-taped and the audiotapes will be transcribed by Point West transcription company, a professional transcription company.
- Transcribers will sign a form stating that they will not discuss any item on the tape with anyone other than the researchers.
- You will be sent the transcription for review and edits if needs be.
- The audiotapes will be stored in locked files before and after being transcribed. Tapes will be destroyed once you have approved the transcription.
- You will be sent a copy of the final report, and you will have the chance to comment before it is made public.

Risks and Discomforts
There are few risks. However, you may find talking about your professional experience in withdrawing life support to be upsetting or emotional. You do not have to answer any question that makes you feel uncomfortable or that you find too upsetting.

Should you need any additional help or support we will refer you to:

If you live in Canada:

Suicide Prevention Service (CSPS): 1-833-456-4566

Or for specific provincial support:

Prince Edward Island Crisis Line – 1-800-218-2885
Quebec National Crisis Line – 1-866-277-3553
Saskatchewan Crisis Line – 1-306-525-5333
Nova Scotia Crisis Line – 1-888-429-8167
Ontario Crisis Line – 1-866-531-2600
Manitoba Crisis Line – 1-877-435-7170
New Brunswick Crisis Line – 1-800-667-5005
Newfoundland and Labrador Line 1-888-737-4668
British Columbia Mental Health Support 310-6789
Alberta Crisis Line – 403-266-4357

If you live in the USA:

Trans LifeLine – U.S.A. 1-877-565-8860
The Trevor Project Lifeline 866-488-7386
U.S. National Suicide Prevention LifeLine 1-800-273-TALK
Military Veterans Canada and U.S.A. 1-800-273-8255 Press 2 for Spanis

Benefits
Being interviewed may not help you directly, but information gained may help the profession of respiratory therapy in the future.

Costs
There is no cost for you to attend the individual interview.

Payment for participation
You will receive no payment or reimbursement for any expenses related to taking part in this study.

Confidentiality
We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records. A list of names and addresses of participants will be kept in a secure file so we can send you a summary of the results of the study. If the results of this study are presented in a meeting or is published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point. The collection and access to personal information will follow provincial and federal privacy legislation.

Audiotapes of our discussion will be typed and used to prepare a report. The typed notes will be kept for three years in a secure locked file cabinet and office. Only the research staff will have access to them and know your name.

Some people or groups may need to check the study records to make sure all the information is correct. All of these people have a professional responsibility to protect your privacy.

These people or groups are:
- The Health Research Ethics Board of the University of Manitoba which is responsible for the protection of people in research and has reviewed this study for ethical acceptability
- Quality assurance staff of the University of Manitoba and who ensure the study is being conducted properly.

All records will be kept in a locked secure area and only those persons identified will have access to these records. If any of your research records need to be copied to any of the above, your name and all identifying information will be removed. No information revealing any personal information such as your name, address or telephone number will leave the University of Manitoba.

Permission to Quote:
We may wish to quote your words directly in reports and publications resulting from this. With regards to being quoted, please check yes or no for each of the following statements:

Researchers may publish documents that contain quotations by me under the following conditions:	
☐ Yes ☐ No	I agree to be quoted directly (my name is used).
☐ Yes ☐ No	I agree to be quoted directly if my name is not published (I remain anonymous).
☐ Yes ☐ No	I agree to be quoted directly if a made-up name (pseudonym) is used.

Voluntary Participation/Withdrawal from the Study
Your decision to take part in this study is voluntary. You may refuse to participate or withdraw from the study at any time. Your participation or discontinuance in the study will not constitute an element of your job performance or evaluation nor will it be part of your personal record at any institutions.

Questions
If any questions come up during or after the study contact the principal investigator and the study staff: Louise Chartrand at louise.chartrand@umanitoba.ca

For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at (204) 789-3389

Consent Signatures:

1. I have read all 4 pages of the consent form.
2. I have had a chance to ask questions and have received satisfactory answers to all of my questions.
3. I understand that by signing this consent form I have not waived any of my legal rights as a participant in this study.
4. I understand that my records, which may include identifying information, may be reviewed by the research staff working with the Principal Investigator and the agencies and organizations listed in the Confidentiality section of this document.
5. I understand that I may withdraw from the study at any time and my data may be withdrawn prior to publication.
6. I understand I will be provided with a copy of the consent form for my records.
7. I agree to participate in the study.

Participant Signature_____ **Date (dd/mm/yyyy)**_____

Participant Printed Name: _____ **RT License#:**_____

RT Licensing Body:_____

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent.

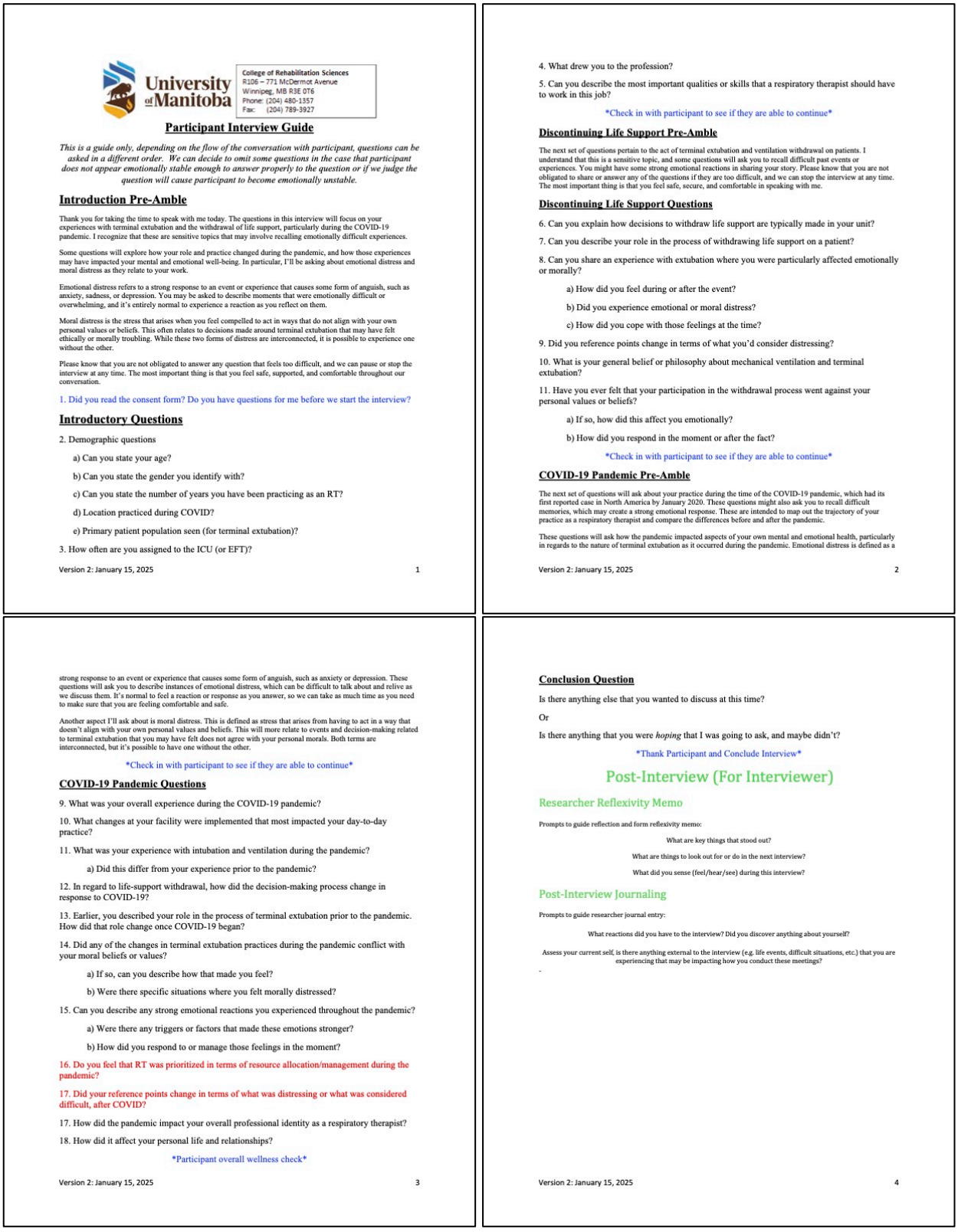
Printed Name: _____ **Date (dd/mm/yyyy)**_____

Signature: _____

Role in the study: _____

Relationship (if any) to study team members: _____

Appendix C: Full Interview Guide



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Participant Interview Guide

This is a guide only, depending on the flow of the conversation with participant, questions can be asked in a different order. We can decide to omit some questions in the case that participant does not appear emotionally stable enough to answer properly to the question or if we judge the question will cause participant to become emotionally unstable.

Introduction Pre-Amble

Thank you for taking the time to speak with me today. The questions in this interview will focus on your experiences with terminal extubation and the withdrawal of life support, particularly during the COVID-19 pandemic. I recognize that these are sensitive topics that may involve recalling emotionally difficult experiences.

Some questions will explore how your role and practice changed during the pandemic, and how those experiences may have impacted your mental and emotional well-being. In particular, I'll be asking about emotional distress and moral distress as they relate to your work.

Emotional distress refers to a strong response to an event or experience that causes some form of anguish, such as anxiety, sadness, or depression. You may be asked to describe moments that were emotionally difficult or overwhelming, and it's entirely normal to experience a reaction as you reflect on them.

Moral distress is the stress that arises when you feel compelled to act in ways that do not align with your own personal values or beliefs. This often relates to decisions made around terminal extubation that may have felt ethically or morally troubling. While these two forms of distress are interconnected, it is possible to experience one without the other.

Please know that you are not obligated to answer any question that feels too difficult, and we can pause or stop the interview at any time. The most important thing is that you feel safe, supported, and comfortable throughout our conversation.

1. Did you read the consent form? Do you have questions for me before we start the interview?

Introductory Questions

2. Demographic questions

a) Can you state your age?

b) Can you state the gender you identify with?

c) Can you state the number of years you have been practicing as an RT?

d) Location practiced during COVID?

e) Primary patient population seen (for terminal extubation)?

3. How often are you assigned to the ICU (or EFT)?

4. What drew you to the profession?

5. Can you describe the most important qualities or skills that a respiratory therapist should have to work in this job?

Check in with participant to see if they are able to continue

Discontinuing Life Support Pre-Amble

The next set of questions pertain to the act of terminal extubation and ventilation withdrawal on patients. I understand that this is a sensitive topic, and some questions will ask you to recall difficult past events or experiences. You might have some strong emotional reactions in sharing your story. Please know that you are not obligated to share or answer any of the questions if they are too difficult, and we can stop the interview at any time. The most important thing is that you feel safe, secure, and comfortable in speaking with me.

Discontinuing Life Support Questions

6. Can you explain how decisions to withdraw life support are typically made in your unit?

7. Can you describe your role in the process of withdrawing life support on a patient?

8. Can you share an experience with extubation where you were particularly affected emotionally or morally?

a) How did you feel during or after the event?

b) Did you experience emotional or moral distress?

c) How did you cope with those feelings at the time?

9. Did you reference points change in terms of what you'd consider distressing?

10. What is your general belief or philosophy about mechanical ventilation and terminal extubation?

11. Have you ever felt that your participation in the withdrawal process went against your personal values or beliefs?

a) If so, how did this affect you emotionally?

b) How did you respond in the moment or after the fact?

Check in with participant to see if they are able to continue

COVID-19 Pandemic Pre-Amble

The next set of questions will ask about your practice during the time of the COVID-19 pandemic, which had its first reported case in North America by January 2020. These questions might also ask you to recall difficult memories, which may create a strong emotional response. These are intended to map out the trajectory of your practice as a respiratory therapist and compare the differences before and after the pandemic.

These questions will ask how the pandemic impacted aspects of your own mental and emotional health, particularly in regards to the nature of terminal extubation as it occurred during the pandemic. Emotional distress is defined as a

strong response to an event or experience that causes some form of anguish, such as anxiety or depression. These questions will ask you to describe instances of emotional distress, which can be difficult to talk about and relive as we discuss them. It's normal to feel a reaction or response as you answer, so we can take as much time as you need to make sure that you are feeling comfortable and safe.

Another aspect I'll ask about is moral distress. This is defined as stress that arises from having to act in a way that doesn't align with your own personal values and beliefs. This will more relate to events and decision-making related to terminal extubation that you may have felt does not agree with your personal morals. Both terms are interconnected, but it's possible to have one without the other.

Check in with participant to see if they are able to continue

COVID-19 Pandemic Questions

9. What was your overall experience during the COVID-19 pandemic?

10. What changes at your facility were implemented that most impacted your day-to-day practice?

11. What was your experience with intubation and ventilation during the pandemic?

a) Did this differ from your experience prior to the pandemic?

12. In regard to life-support withdrawal, how did the decision-making process change in response to COVID-19?

13. Earlier, you described your role in the process of terminal extubation prior to the pandemic. How did that role change once COVID-19 began?

14. Did any of the changes in terminal extubation practices during the pandemic conflict with your moral beliefs or values?

a) If so, can you describe how that made you feel?

b) Were there specific situations where you felt morally distressed?

15. Can you describe any strong emotional reactions you experienced throughout the pandemic?

a) Were there any triggers or factors that made these emotions stronger?

b) How did you respond to or manage those feelings in the moment?

16. Do you feel that RT was prioritized in terms of resource allocation/management during the pandemic?

17. Did your reference points change in terms of what was distressing or what was considered difficult, after COVID?

17. How did the pandemic impact your overall professional identity as a respiratory therapist?

18. How did it affect your personal life and relationships?

Participant overall wellness check

Conclusion Question

Is there anything else that you wanted to discuss at this time?

Or

Is there anything that you were *hoping* that I was going to ask, and maybe didn't?

Thank Participant and Conclude Interview

Post-Interview (For Interviewer)

Researcher Reflexivity Memo

Prompts to guide reflection and form reflexivity memo:

What are key things that stood out?

What are things to look out for or do in the next interview?

What did you sense (feel/hear/see) during this interview?

Post-Interview Journaling

Prompts to guide researcher journal entry:

What reactions did you have to the interview? Did you discover anything about yourself?

Assess your current self, is there anything external to the interview (e.g. life events, difficult situations, etc.) that you are experiencing that may be impacting how you conduct these meetings?

Red text indicates questions that were added from reflexivity over the interview period.

Appendix D: Audit Trail Table

Participant Audit Trail Table									
Participant	Gender (Self-Identified)	Age (Years)	#Profession Years	EFT in ICU	Patient Population	Interviewer	Interview Date	Interview Duration	Audio Transcriber
Anne	F	60+	30+	30% of 0.6 EFT	Adults	LC/LS	08-Apr-25	47 min 05 sec	LS
Brooke	F	30-39	0-9	100% of 0.6 EFT	Adults	LC/LS	10-Apr-25	48 min 48 sec	LS
Carly	F	30-39	10-19	90% of 0.6 EFT	Neonates	LC/LS	11-Apr-25	92 min 28 sec	LS
Daniel	M	30-39	0-9	100% of 0.8 EFT	Adults	LS	15-Apr-25	30 min 22 sec	PWTS & LS
Evelyn	F	20-29	0-9	80% of 0.8 EFT	Adults	LS	16-Apr-25	25 min 51 sec	LS
Frank	M	30-39	10-19	100% of 1.0 EFT	Adults	LC	22-Apr-25	85 min 16 sec	LS
Grace	F	60+	30-39	100% of 1.0 EFT	Neonates	LS	28-Apr-25	67 min 30 sec	LS
Henry	M	20-29	0-9	95% of 1.0 EFT	Adults	LS	02-May-25	64 min 42 sec	PWTS
Irene	F	30-39	10-19	100% of 1.0 EFT	Adults	LS	06-May-25	49 min 07 sec	PWTS
June	F	30-39	10-19	100% of 1.0 EFT	Adults	LS	04-Jun-25	37 min 16 sec	PWTS

Note: In cases where two interviewers are listed, the underlined initials indicate the lead interviewer.
Legend: F – Female, M – Male, EFT – Equivalent Full Time, LS – Lea Soliman, LC – Louise Chartrand, PWTS – Point West Transcription Service

Appendix E: Reflexive Memo Table & Researcher Journal Entry Table

Interview Reflexivity Memo Table	
Reflexivity Memo	
Participant ***Frank***	As this interview was conducted solely by Louise, this reflexivity memo was created after listening to the audio recording file and reading the verbatim transcription. I've noticed that this is another RT that has left their original position in critical care following the COVID pandemic. Granted, this individual has stayed in the RT profession, whereas other interviewees that have shared the same feelings and emotions as them have opted to leave respiratory therapy, or the healthcare profession overall. This interviewee shared that their entire family also worked in healthcare, which was also part of the motivation for them to have a career in it, so this may be a factor in why they chose to stay in the field. They also talked about growing up on a farm and having witnessed and experienced death early on in this childhood. This poses the question: does the early introduction of mortality impact the ability for individuals to process and witness death? One of the interview questions that I ask our participants is "What qualities/skills do you think are important for a person to be an RT?" Perhaps I should have a follow-up question to that which involves whether or not the participant thinks experiencing death earlier on in life prepares a person for working in a field like healthcare. If future participants mention similar experiences to this participant, this may a question that should be added.
Reflexivity Date ***07-Jul-2025***	

Reflexivity Memo	
Participant ***Grace***	Very emotional talking about COVID experiences. Seems to look on the side of optimism more often. Perspective is different since it relates more to babies, sense of innocence compared to adults. She seems to take the better parts of the pandemic and highlight those as things that she carries with her today, despite also feeling the stress and burnout during this time. Sees herself as part of the solution, rather than the problem during the pandemic – which was beautiful. She said doing this interview felt cathartic and healing, being able to acknowledge what they went through, and have it solidified in the data felt like coming to terms with it, grieving it, and letting it go to that the healing can begin. She mentioned that aside from the COVID-related deaths, there were other, little deaths that occurred in terms of addition levels, overdoses, burnout, mental anguish, career attrition, etc. For future interviews, ask RTs that deal with neonatal populations if they also saw a change in pre-term births, or things they noticed in the labour/delivery world.
Reflexivity Date ***28-Apr-2025***	

Reflexivity Memo	
Participant ***Henry***	Participant made a comment that the questions become sensitive quickly, reviewing the question guide, maybe there should be buffer questions between demographics/basic questions and ones related to withdrawing treatment. Noticed that when discussing reference points, most interviewees would talk about emotional/mental considerations, but this participant mentioned that his current approach to care is different. A lot of discussion around changes to post-intubation care. Participant has background in health administration, so can understand the institution/facility's admin side more. Made a great point about CHANGE burnout, will keep this in mind to ask future interviewees if this resonated with them. This is the first I've noticed this being mentioned.
Reflexivity Date ***02-May-2025***	

Reflexivity Memo	
Participant 6 ***Irene***	In the first couple of questions that I asked this interviewer, they had a memorable quote that stuck in my mind, "I like chaos" which I thought was interesting because it encapsulates what a lot of other interviewees have responded to in terms of why they chose the respiratory therapy profession, and what skills a person needs to become a respiratory therapist. A lot of answers have involved being able to think critically, staying calm in stressful situations, knowing how to communicate, but these typically describe skills that can be learned or developed over time. This interviewee shares something that is innate within a person – that they have to love the chaotic and unpredictable nature of the job, not as something that they have to overcome, but something that they *welcome* and seek out. The previous Manitoba RT that was interviewed shared how their experience with death on their family farm helped them conceptualize and understand death as they experienced it in the healthcare field. I wondered if this factor of "early life experience with mortality" would be a factor in whether or not interviewees continued as an RT or in healthcare after the pandemic ended. What this interviewee shared may be another one: does the affinity for chaos serve as a protective factor of resiliency in respiratory therapy?" I may create an additional interview question to help structure this idea, or at least, a follow-up question if other interviewees report the same emotion. This interviewee also shared that a lot of the exhaustion that came from the pandemic were related to the amount and frequency of policy changes that occurred every day. Immediately before the pandemic, this interviewee was promoted to a supervisory RT role as opposed to a general duty one, and therefore the direction that they had to give their team was confusing and at times, hypocritical, which affected morale and team cohesion. Their role transformed more as a float/critical care RT as her supervisory duties were lessened due to the pandemic. Therefore, she had a unique insight into the structural organization of the hospital, being someone who both had to roll out policy and procedural changes and also experience them providing frontline care. This interviewee also had the responsibility of training redeployed RTs that were from other areas, sometimes not even within critical care, and the empathy related to watching these trainees deal with not many terminal cases on their first day.
Reflexivity Date ***06-May-2025***	

Reflexivity Memo	
Participant ***June***	At the beginning of the interview, I gave my preamble about how the questions asked might invite the participant to recall difficult memories from the pandemic, and they stated that they felt they must have repressed a lot of it because there wasn't anything notable that came to mind. This concerned me a little bit since many of the questions ask about experiences during this time and sometimes ask participants to compare these events to before COVID. They still were able to share and give good data, but I felt like I had to coax a lot more out of her compared to others. In previous interviews, my concern was going over time, or letting the interview go on for too long, but for this one, I felt like I was going through the questions so fast and was worried that I wasn't collecting what I needed from them.
Reflexivity Date ***04-May-2025***	

Researcher Journal Entry Table	
Journal Entry	
Participant ***Frank***	I felt honored that this interviewee remembered me as a student going through the respiratory therapy program in Winnipeg. I hope that the impression I left was a positive one as I remember having a lot of nervousness and anxiousness being a student. This is the only interviewee that I previously had as a preceptor, so in hindsight I am somewhat thankful that I was not the one to interview him. I feel like I would have been insecure and nervous, just like when I was a student learning under them, and that may have affected the way I ask them questions and gather data. This will be something that I will be considering in the future as we recruit more participants. It may be safer to default to my advisor interviewing these individuals. Since I didn't interview this individual, I only experienced this meeting listening to the recording and reading the transcript. The interviewee has a wealth of experience and knowledge, more so than any other interviewee we've had so far. His answers incorporate concepts and literature that deepen his answers further than just his experience because he implements his answers with a global context. This may mean that their data will be difficult to code with the other interviews, as he doesn't seem to stay with one topic or one concept when he answers a question.
Journal Entry Date: ***08-Jul-2025***	

Journal Entry	
Participant ***Grace***	I felt moved emotionally by her description of an event that impacted her, that she stayed with her colleague to support her not because of COVID restrictions that made them stay in certain rooms, but because she felt a sense of camaraderie and knew she couldn't just leave her colleague there to experience this difficult time on their own. It reminded me of why I

Journal Entry Date ***29-Apr-2025***	chose to be a respiratory therapist and part of the reason I love my job, and why I'm passionate about the subject matter of my thesis. I currently am experiencing loss in my personal life with the death of my partner's mom, who was also intubated and mechanically ventilated. She did not undergo terminal extubation, as she was in the midst of receiving critical care therapies in an attempt to rehabilitate her. Sadly, she did not survive. This made it especially difficult to hear this participant's stories of neonatal patients that underwent life support withdrawal. Even though it is a natural part of life, death in any form is painful.

Journal Entry	
Participant ***Henry***	This participant and myself both practice in the community hospital sector of the Winnipeg Regional Health Authority, so I am familiar with them on a personal level and their practice, but even I learned new things about what they were dealing with and what they went through. It made me reflect on our friendship and wonder if I was as supportive as I should've been during this time. Though I was dealing with my own experiences being an RT, I feel like I should've reached out more. During this time, someone close to have informed me that their mother was in the hospital. She was also a recipient of intubation and ventilator and unfortunately passed while receiving the therapy. This interview made me think of the differences in practice between here and overseas (where she was receiving care) and the trauma that their family may be going through right now as they navigate such a different healthcare system. It makes me wonder about the psychological health of the staff oversees, or if they are unaffected if this is the standard of practice, and how stark the differences during COVID must be.
Journal Entry Date ***03-May-2025***	

Journal Entry	
Participant ***June***	I am still recovering from being sick following my travels, and while I feel a lot better, my voice is still on the mend. It's very hoarse and sometimes, after having to speak for a long time, it cracks and the words don't come out. Even though I know I have no control over it and that I'm doing all that I can to get better, it makes me feel unprofessional. I'm constantly apologizing for it and whenever I have to repeat myself, or a someone doesn't understand me, it makes me feel really frustrated and somewhat sad. Thankfully it hasn't impacted being able to recruit and do the interviews themselves, I'm doing one interview a day, and usually by the end my throat is pretty sore and tired. I went to the walk-in clinic yesterday and was prescribed some medication to help with the swelling, I'm really hoping it'll help and that my voice will get better soon.
Journal Entry Date ***05-May-2025***	

Journal Entry

Participant ***Irene***	Since this participant is from Manitoba, specifically Winnipeg, and works in a supervisory role, I have known of this participant but never worked with them or at their facility. It was the first that I heard of participant being involved in training the redeployed staff for critical care. At my own facility during COVID, our CSL was also taken and redeployed to a different hospital as their position wasn't considered critical and we no longer had an in-hospital ICU. I've only experienced what it was like working without that added staff member but never had heard about where those people went and what they must have experienced being thrust into critical care so quickly. Our hospital still performed critical care in our urgent care department, but what about RTs that came from homecare, community care, or outpatient clinics? I couldn't imagine having the responsibility of training these individuals to ensure that not only are they adhering to the drastic changes in policy and procedure, but also that they are providing critical care to patients in a safe and secure manner. This added responsibility must have added additional distress to the individual, who is still in her original job position from before the pandemic. The level of resiliency she has must be incredible, which makes me feel like if I were to rejoin critical care as a career choice, I would be reassured if I worked under this individual.
Journal Entry Date ***07-May-2025***	

Appendix F: Hierarchy Chart of Codes

Full List NVivo Codes (alphabetical)

Codes	Number of coding referenc...	Aggregate number of cod...	Number of items cod...	Aggregate number of items coded
Nodes\\Coping Mechanisms	79	79	10	10
Nodes\\COVID Changes to RT Prac...	128	128	10	10
Nodes\\COVID impacts on patients...	62	62	10	10
Nodes\\COVID impacts on workers	186	186	10	10
Nodes\\Decision-Making	61	61	10	10
Nodes\\Demographics	53	53	10	10
Nodes\\Draw to Profession	26	26	10	10
Nodes\\Emotional Distress	156	156	10	10
Nodes\\Extubation as Event	42	42	10	10
Nodes\\Extubation as Task	45	45	10	10
Nodes\\General Pandemic Experie...	83	83	10	10
Nodes\\Moral Distress	62	62	10	10
Nodes\\Notable Quotes	22	22	5	5
Nodes\\Notable Stories	29	29	8	8
Nodes\\Personal or Professional Id...	68	68	10	10
Nodes\\Philosophy or beliefs of MV	36	36	9	9
Nodes\\Reference Points	25	25	10	10
Nodes\\RT Prioritization	27	27	9	9
Nodes\\RT Role in Process	73	73	10	10
Nodes\\Skills to be an RT	95	95	10	10
Nodes\\Supports & Services	36	36	10	10

Appendix G: Final Code Summary Table

Summary of Final Data Report			
Theme	**Emerging Category**	**Related Codes**	**Data Excerpt Examples**
Practice in Retrospect **(Pre-pandemic Stage)**	***Initial Motivations***	*Skills to be an RT*	*Anne:* "You need to be definitely compassionate, you need to be aware, right, you need to be able to sort of react, or think fast, you know, you need to be able to almost like "read a room" so to speak, because there's sometimes where there's so much emotion going on." *Brooke:* "You have to be able to emotionally regulate yourself and be emotionally stable and then be able to prioritize [and] multitask." *Carly*: "I think you have to be adaptable, you have to be flexible, you have to be willing to move from thing, to thing, to thing." *Daniel:* "You've got to be able to work in high stress situations and still be able to maintain focus with the task at hand." *Evelyn:* "They really have to be able to think on their feet, act quickly, [and] work well with others." *Frank:* "Detachment." And "Being able to think quickly and calmly in pretty high-stress situations." *Grace:* "You have to be very agile, not that that's the main crux of it, but that to me is one of the most important things about being a respiratory therapist." *Henry:* "I think communication is very important. Like, proper time management or prioritisation skills are very important. Independence is very important, and adaptability." *Irene:* "Resiliency." *June:* "Compassion [and] teamwork"
		Draw to Profession	*Frank:* "Thrill-seeking [and] adventure" *Grace:* "The fast-paced, that there's always something happening, [a very] active profession and responsive profession – it was just so exciting to me." *Brooke:* "The work, the variety of things we do, and the various areas of the hospital we work in." *Daniel:* "Family member was a respiratory therapist, and I followed in their footsteps." *Evelyn:* "Found it by accident, but it sounded interesting, fun, and liked the fluidity." *Henry:* "I liked the transientness of RT. I like how we're working [in] different spaces every shift and I'd like to be able to work around different areas in the healthcare system."

	Dissonance Within Familiarity	*RT Role in Process*	*Henry:* "Interdisciplinary, patient-centered approaches." *Anne:* "Responsibilities of the airway and ventilator." *Carly:* "Making sure the team is on the same page with the extubation plan." *Grace:* "In not in charge, I'm a caregiver at the bedside, but I'll communicate concerns to the physician if I have them." *Henry:* "Presenting respiratory and ventilation settings and discussions that have been made or strategies deployed thus far and how the patient's responding to that." *Henry:* "Discussing or exploring options or alternatives, then addressing if there's nowhere further that we can go within our standards of care, and if the patient's simply not responding."
		Philosophy/Beliefs about MV	*Anne:* "Respect the patient's wishes but know when there is nothing more that can be done." *Henry:* "I think we're really good at addressing how we can wean and switch the patient over spontaneously when they're able to, and limiting the days of mechanical ventilation, but I think that our management of mechanical ventilation could be a little bit more evidence informed." *Brooke:* "We don't practice terminal extubation enough; those difficult conversations are never made in time." *June:* "Underregulated with RTs being underutilized in this skill."
		Decision-Making	*Daniel:* "We're not involved at all, we're managing the ventilator, and that choice comes down to the physician and family." *Frank:* "Decisions to discontinue are when we are maxed out on our ability to ventilate." *Frank:* "As far as decision-making goes, [it's] essentially part of a hierarchy. You have the physician who is the ultimate decision-maker." *Henry:* "We're just available for when the decision is made, providing support for the family through the process of discontinuation."
Shocks to the System **(Early Pandemic Stage)**	***Patient & Provider Changes***	*COVID impacts on patients/families*	*Anne:* "It's hard to get a hold of family, to find the power of attorney, or someone to make a decision." *Carly:* "Families unable to be with the patients unless it was through an iPad." *Brooke:* "Patients were dying alone because family was not allowed in the room." *Frank:* "There were families that were furious and in complete denial." *Brooke:* "Parents couldn't be in the ICU, so staff had to play that role."

		COVID changes to RT Practice	*Anne:* "New, ARDS-focused protocols." *Irene:* "It's just constant back-to-back patients. Just intubate, central line, art line, next patient, then repeat." *Irene:* "Quicker movement from first intubation attempt, to LMA, to cricothyrotomy." *Grace:* "You'd get in in the morning, you'd hit the ground running, and you'd run for 12 hours straight, from one thing to the next thing, and people within the system – and nurses, doctors, getting angry with you because you weren't there when you needed to be there, it's because you had to prioritize between one person dying versus another person dying." *Irene:* "Like the shift of the day changed a little bit because you were pulled in so many directions. And you just have to learn how to time-manage and prioritize where was the highest need for yourself to be."
	Adapting Practice	*RT Role in Process*	*Henry:* "Discontinuation of ventilation or terminal extubation would occur surrounding the family's wishes." *Grace:* "I would say, like specific to RT there was new roles that we took on, but definitely like, were just in depth of what was already an RT role." *Henry:* "We took on more of a leadership role during the pandemic, sedation, weaning, and ventilation strategies." *Irene:* "RTs were redeployed during the pandemic to the ICU."
		Decision-Making	*Brooke:* "I feel like sometimes the decisions were made quicker, because there were more beds we needed… if it wasn't pandemic time, or the turnover for patients was so fast that like, the decisions were made a little bit faster during COVID than normal." *Anne:* "Patients that came from home, or a nursing home, and the direction wasn't clear." *Irene:* "Patient wishes, family wishes, sometimes you go against those, it's usually the physician leading that decision." *Irene:* "Situations go on for too long, but we're doing it because it's the family wishes, because the patient's not capable of decision-making. It's like, why are we continuing to do this."
	Strain on System	*Extubation as Event*	*Anne:* "The disease, the way it went, the way it presented and how people were dying. The pandemic was different than the single sort of reasoning for extubation." *Anne:* "We were trying to comfort [the patient] as we turn off the ventilator and extubate [them] because their family couldn't be there." *Frank:* "Extubations were strange when you have the family crying on an iPad when they couldn't come in. Like, do you want me to turn the iPad away while I take the breathing tube out?" *Grace:* "I did the discontinue [and] sat there until the baby had passed away, and it took a couple of hours – during that time, [the nurse and I] talked about our own children, our own fears surrounding COVID, and how terrible this situation was…"

		Moral Distress	*Irene:* "The amount of policy changes that were coming every week, every two days, that was stressful because they were telling us to reuse our N95s and we had to get them signed out." *Irene:* "You had to find loopholes in policies to protect the staff." *Frank:* "It was strange when you had the family crying on an iPad because they couldn't come in." *Irene:* "There was a sense of desperation from the family to be with their loved one, denying them was morally distressing." *Grace:* "I wouldn't call it a guilt, but almost like a shame of our system [that we can't make an exception], like how impossible that this – like what is that doing to them? You know, like they had a child that they were never able to hold." *Grace:* "In every situation, I felt comfortable with the decision that is made." *Henry:* "Nothing was familiar during the pandemic; there has to be some level of adaptability. First policy, then practice, not the most efficient, and that went against my beliefs."
		General Pandemic Experiences	*Anne:* "It was great driving to work because there was no one on the road!" *June:* "[It was] chaos." *June:* "I can't go to the bathroom. I can't eat. I can't drink. I have this mask shoved on my face. My skin is breaking down. I'm exhausted. My patients are dying. I can't help them." *Henry:* "I felt a lot of guilt during the pandemic. I was leaving the house regularly; I wasn't struggling financially and had great job security. I know a lot of people that were laid off." *Henry:* "People are looking for comfort, and they reach out to folks who deal with [COVID] for comfort, but I definitely had some guilt as well."
Quality Care and Motivation Struggles **(Late Pandemic Stage)**	***Demand Outpaces Supply***	*COVID impacts on workers*	*Anne:* "So many additional disciplines had to be included because with COVID, it wasn't one formula for every patient." *Irene:* "…The amount of policy changes that were coming every week, every two days, that was stressful…" *Irene:* "[With patients] we know it's likely going to be the last straw… they would change ACP statuses from R to M." *Henry:* "Policies at one facility was different than another, which was frustrating because we're in the same region!" *Henry:* "Lack of adaptability." … "Lack of transparency regarding what we should be doing versus what is more comfortable to do." *June:* "I think working and seeing what I saw on the frontline and then coming home to a community that was not abiding by the rules and kind of just rolling their eyes about it all – I definitely had a lot of frustrations and anger."

		Extubation as Task	*Anne:* "[Terminal extubations] just became a little more… I don't know, because – I don't want to use the word "routine" but… it would be similar to routine because it happens more often, you become more familiar with it." *Anne:* "Well, that's where I say, during COVID – because there was more extubations it became more common table talk, as opposed to the rare one." *Irene:* "It's easier in the moment on the iPad, but it's harder when you walk away and realize that there was a family on an iPad and not being able to be with their loved one. So, I would say the task itself is easier." *Carly:* "I feel like a huge emotional part of this was that you get good at separating in your mind, like you get good at compartmentalizing the deaths that happen at work… you justify it somehow in your head or you're numb to it because you have to. Like how you get through your day?" *Daniel:* "Yeah, when it's time to do the task, it's just – I mean you're there to do the task, just get it done as respectfully and responsibly as possible." …. "Anything after post-pandemic, it was just becoming a routine, it became a lot easier because of it." *Grace:* "I think that maybe it was nurses just calling to say, "Just come and turn the ventilator off, we've done the extubation." Because there wasn't anybody available to actually do the extubation, so then as far as that part of the job, I would say we had to prioritize between putting someone on life support or taking somebody off."
	Exhaustion Outpaces Endurance	*Emotional Distress*	*Irene:* "I could never go back to that same level of adrenaline." *Henry:* "I feel like I was in fight-or-flight during the pandemic, so [after a shift] I would sit in my car in the parking lot and couldn't drive home." … "I held a lot of guilt when things wouldn't work, like when people would die, when nothing would work, when no one was getting extubated because they were getting better, only because they were dying." *Frank:* "I think the anger and the resentment towards the people who were actively spreading misinformation, it was building up. And I was kind of raging against that as much as I could. And then I just kind of [thought], okay never mind. What is the point of all of this?" *Henry:* "Just the overall atmosphere of death, it just felt like I was not helping people. It did not feel heroic." *Brooke:* "It was stressful, it just seemed like we were helpless, no matter what we did everything was falling apart, everyone was falling apart. Not being able to give everyone the time that they needed, we were just all over the place." *June:* "I probably had a couple of mental breakdowns with the lack of understanding within the community."
		RT Prioritization	*Daniel:* "For a minute there, the media is talking about it and highlighting RTs, but like anything it has its little moment and then it blows over, and then you're forgotten about and you just go back to doing your thing." … "You get all this praise during COVID, then there's negotiating talks that come from wage increases, and all the allied health gets forgotten about." *Henry:* "I would say that, at the beginning – no [RT was not a priority]! As we moved further along, then yes! But yeah, at the beginning, just the example of being denied an N95 when I'm at the head of the bed during an intubation, it's something that I'll never forget." *Brooke (regarding RTs being prioritized):* "No, especially not in the beginning. Even though they realized that RTs are there, and maybe not in the beginning as much because, like I said, they wouldn't give us access to certain resources, or they would think that, only one of us are needed because they don't know the workload that we are dealing with, and things like that."

			Irene: "I feel like we somehow lucked out and got a lot of support. [My RT Manager] was working bedside. And I don't know if that's because we have like the worst [patient-worker] ratio to begin with and then they're like, "Okay. [RTs] need more." So, I feel like we were supported from leadership to get those redeployed staff."
		Coping Mechanisms	*Henry:* "I'm drinking on my days off; I guess it was a different type of coping because it was always focused outwards." *Irene:* "Bad coping mechanisms, like more drink[ing] for sure." *Anne:* "Because we have our own department, that's kind of when you go back to the department and you talk about stuff." *Irene:* "I remember walking back to the department and being in kind of silence. I have learned over the years to talk about things more, because I think that that helps with things, like that helps with the processing of things." *Irene:* "I was coping, coping, coping. I was going to the gym on my lunch breaks through the wave two, and then as soon as I got that break, I was like, "Well, I can't cope with anything anymore." So, nothing was working." *Brooke:* "It helped just to discuss with coworkers, the things that we were going through, we were always like – just to process things and we had everyone else that was going through the same things, just discussing our experiences and our feelings that helped … just to get away from the situation – get away from our ICU that we were in all the time."
Working in the Aftermath **(Post-Pandemic Stage)**	***Processing the Fallout***	*Reference Points*	*Anne:* "Like, so far we've had enough equipment for people, there's other places that… they don't even have equipment for people, so… it did change my pattern of thinking, my reference points." *Anne:* "I think that sometimes, when things start becoming more and more, and more, we do get a little more desensitized, so I do think there was some desensitization during COVID." *Irene:* "Like did you see like 10 people die today?" So, like I'm trying to catch myself because we chose, like I chose this career, right? I didn't choose a pandemic and to see all of that." *Daniel:* "I feel like it made me a better RT is what I'm trying to say, going through COVID and ventilator strategies and learning the – kind of learning the logistics of the hospital when there is an epidemic, hopefully we learn from that, but I don't know if we will."

		Personal or Professional Identity	*Irene:* "[There were] stressors of being the healthcare person in the family, and the 'I could be contaminated' possibility." *Daniel:* "People knew about RT, people knew I was in contact with the disease at the time, it even affected my [personal life]. People don't want to risk an opportunity of getting sick." *Henry:* "There were a lot of social and personal stressors, I felt like there was a higher responsibility from me, a lot of people came to me asking about the vaccines, how infections work, when to call 911." *Henry:* "The way I talk about healthcare is a little bit more human, and a little bit more patient-centered, it's not as adrenaline-filled and the "cool" things that we see, but more humanistic. I took more of an advocate role when I talk about my profession and my identity with the profession." *Grace:* "I think that our practice grew, our confidence grew, because we were operating at a greater scope. I saw [respiratory therapists] become more confident in their decisions and often in their abilities to handle a situation. They became leaders."
	Healing in the New Normal	*Supports & Services*	*June:* "We're directly involved and we experience it all too, so being involved in the debrief helps." *Grace:* "There was really good education, they were very focused on respiratory and making sure we that we had our proper N95 masks – we were fitted, and as different brands ran out, we were retested." *Anne:* "The hospital in general, and this is where I give them credit, there was also some very, very generous and kind people out there as well that – you know, you go to work and somebody might have sponsored lunches for that day. Or you go to work and somebody once sponsored ice cream for everybody that day." *Anne:* "[The hospital] has once a year, some sort of recognition thing, for patients that have died. So, I think that's something that you can attend [and] to help also, for closure."
		Coping Mechanisms	*Grace:* "The number of times that we've seen people saying goodbye too early or having regrets, I've learned to live my life without regrets." *Henry:* "I definitely became more of an advocate of the profession, especially seeing people firsthand, we all saw a different demographic of sick people, especially in the last few waves." ... "And so, just from those experiences and seeing what happens when you're not vaccinated, and seeing what happens when you're not following public health orders, I became, and not just necessarily for RT but just kind of healthcare in general, but I became an advocate for people taking care of themselves and getting vaccinated." *Frank:* "It was camaraderie I think is the big one and just being part of a group that really supports one another. [It's] like soldiers coming back from war. They can't really talk about it with other people. They don't talk about what happened very much. You can kind of try and explain some of the stuff to people, but it's just… our sense of humour…" *Evelyn:* "[It's a] great coping mechanism, like I have a great team at work and we're able to sort of lift each other up. I think – I guess one of the important things about being able to work in this profession is that you kind of have to have a dark sense of humor." *June*: "I allowed myself to have a cry in the bathroom." … "Not everyone is very good at checking in with you, especially when there's a hard [day]. So luckily, I had a good coworker and we just… we had a good talk. Running has always been my therapy. So, I definitely… I remember I ran a lot for a couple of weeks after that to the point that I probably ran a little too much."

Appendix H: Notable Quotes

I always said that the next pandemic… is going to be mental health.
-Carly

I remember my next-door neighbour [redacted]. He was suffering from pretty bad burnout. One of the things he always told me is, "You're getting into a job, but you're not saving lives."
- Frank

"You're delaying the inevitable," is what he told me.
Which was quite a dark thing for someone to say, but it always kind of stuck with me.
It's like, at the end of the day this is… that is the end. Nobody escapes this alive.
We're reducing suffering I think primarily more than anything - much as we'd like to."
- Frank

We're fighting with television in this job. People have this wild idea of what it looks like for someone to die, right? If we could just make a medical show where [someone dies] and it just looks awful, [then] it gives people an idea what it could actually look like. Instead of this, like, "Farewell!" and then just the eyes turn to X's and it's just…that's it. And you watch their soul float up. It's a beautiful thing, but that's not what actually happens in reality.
- Frank

I remember the E.R. doctor at that point, he started crying
and he said, "I might end up intubating one of you."
- Frank, when discussing hospital workers contracting COVID from patients

I always say to myself, like you know, doing terminal extubations is a skill. It's a gift. It's a gift because when you talk about it, or even let that kind of feeling go, I think there's a special quality of human being that can actually be able to cope with seeing so many people at the end of their life.
- Grace, when discussing skills that an individual must have to work as an RT

You are going to see death, you are going to give people their last breath, in a weird way, and it will be people that don't deserve it, it will be young people from an accident, it will be people that got sick and deteriorated fast, so it would probably be more ethical, but we want more people to be in the profession, but you also have to know what you are getting yourself into.
- Henry, when discussing skills an individual must have to work as an RT