





ORIGINAL ARTICLE

Balancing responsibilities, rewards and challenges: A qualitative study illuminating the complexity of being a rapid response team nurse

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Abstract

Aim and Objective: To explore Rapid Response Team nurses' perceptions of what it means being a Rapid Response Team nurse including their perceptions of the collaborative and organisational aspects of the rapid response team (RRT).

Background: For more than 20 years, RRT nurses have been on the frontline of critical situations in acute care hospitals. However, a few studies report nurses' perceptions of their role as RRT nurses, including collaboration with general ward nurses and physicians. This knowledge is important to guide development and adjustment of the RRT to benefit both patients' safety and team members' job satisfaction.

Design: Qualitative focus group interviews.

Methods: A qualitative approach was applied. Throughout 2018 and across three regions and three acute care settings in Denmark, eight focus group interviews were conducted in which 27 RRT nurses participated. Transcribed interviews were analysed using inductive content analysis. Reporting of this study followed the COREQ checklist.

Results: One overarching theme 'Balancing responsibilities, rewards, and challenges' was derived, comprising six categories: 'Becoming, developing and fulfilling the RRT nurse role', 'Helping patients as the core function of RRT', 'The RRT-call at its best', 'The obvious and the subtle RRT tasks', 'Carrying the burden of the RRT', and 'Organisational benefits and barriers for an optimal RRT'.

Conclusion: Being a RRT nurse is a complex task. Nurses experience professional satisfaction and find it meaningful helping deteriorating patients. The inadequate resources available to train general ward staff how to manage basic clinical tasks are an added stress to nurses.

Relevance to clinical practice: Organisational managers need a better understanding of the necessary staffing requirements to attend patients' needs, train staff and handle the increasing acuity of ward patients. Failure to do so will be detrimental to patient outcomes and compromise RRT nurses' job satisfaction.

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KEYWORDS

critical care, critical care outreach, intensive care, patient safety

1 | INTRODUCTION

In North America, Australia and several European countries, Medical Emergency Teams (MET), Rapid Response Teams (RRT) and Critical Care Outreach Teams (CCOT) have been major patient safety strategies in acute care for about two decades (Chan et al., 2010; DeVita et al., 2006; Pattison, 2012). With inspiration from Australia, these different, however very related team, models were introduced into modern hospitals to strengthen the safety net underneath deteriorating general ward patients (DeVita et al., 2010). The teams were developed and implemented to facilitate rapid access to assistance and guidance from competent critical care staff outside the intensive care unit (ICU). The teams should be contacted by the general ward staff when a general ward patient deteriorates or when general ward staff are in need of a second opinion on a patient's condition (Jones et al., 2011).

Medical Emergency Teams and RRTs are parts of so-called Rapid Response Systems (RRS; Lyons et al., 2018; Winters et al., 2013). They comprise of four component or limbs: (1) an afferent limb, which refers to healthcare professionals' observations and patient monitoring to detect patient deterioration. This important clinical task is often structured by an Early Warning Score system and an algorithm for escalating care, which optimally leads to a call for the RRT in case of deviating score or nurses' concern; (2) an efferent limb, which is the response to patient deterioration and the team itself, established to assist stabilising the patient; (3) a limb, which concerns data collection of each call for the team, including data on team interventions; and finally (4) an administrative limb (Sakai & Devita, 2009). Some researchers have focussed on determining the predictive ability of the afferent limb of the system, the Early Warning Score (Jayasundera et al., 2018; Smith et al., 2013). Other studies have evaluated the effect of the efferent limb, the RRT or MET in reducing in-hospital cardiac arrests rates, unexpected deaths or ICU admissions (Hall et al., 2020; Rocha et al., 2018) reporting moderate or inconclusive evidence. Research within the area of the complete Rapid Response Systems have led to somewhat varying results (Chen et al., 2014; Haegdorens et al., 2018). In an integrative review of RRS, Rihari-Thomas and colleagues conclude that RRS are complex interventions requiring a consideration of contextual factors at local levels, appropriate resources, a skilled workforce and positive workplace culture before effective uptake and utilisation can reach their full potential (Rihari-Thomas et al., 2019). Nevertheless, these systems or individual components of the systems are parts of modern acute care settings. Some RRTs are nurse-led, staffed with special trained ICU nurses (Massey et al., 2015; Pattison, 2012). Pros and cons of nurse-led versus physician-led teams have been subjected to research, with equivocal results (Al-Qahtani et al., 2013).

What does this paper contribute to the wider global clinical community?

- Being a rapid response team (RRT) nurse is a complex task resulting in feelings of being both rewarded and challenged.
- RRT nurses experience having professional responsibility and find it meaningful helping deteriorating patients.
- Lack of healthcare staff in general wards and inadequate resources to train staff in basic clinical tasks add stress to RRT nurses.
- Organisational managers need to understand the requirements to attend patients' needs and train staff as this is detrimental to patient outcomes and RRT nurses' job satisfaction.

2 | BACKGROUND

Since RRT was first implemented, being a RRT nurse has become a sustainable part of ICU nurses' working life. In situations where a RRT nurse attends the patient single-handedly, the general ward nursing and medical staff are regarded as collaborative members of the team, and are therefore still in charge of and responsible for patient care (Elliott et al., 2019). Apart from assessing the patient by following the ABCD (Airway, Breathing, Circulation and Nervous system) principles (Thim et al., 2012), the nurse-led team can perform a wide spectrum of clinical tasks related to the identified ABCD problems. These include suctioning the airway, adding or adjusting oxygen supply, giving IV fluid bolus and performing arterial blood gas (Topple et al., 2016). Furthermore, bedside teaching, giving advice and supporting both nurses and physicians are also part of RRT nursing tasks (Donohue & Endacott, 2010). During recent years, attention on the efferent limb has grown. International studies across different types of team models have looked into how general ward nurses perceive activating the RRT and collaborating with the RRT nurses (Astroth et al., 2013; Bingham et al., 2020). Studies have explored, which factors influence nurses' decisions to call the team. One study found that nurses' educational level and their participation in Heart and Lung Resuscitation courses (HLR) have an impact (Pantazopoulos et al., 2012). A systematic review found that factors influencing the activation of the RRT can be categorised into five components and one of these include person-related factors such as nurses' perceptions of the benefits and drawbacks of the RRT, nurses' clinical expertise and the support from colleagues and leaders (Chua et al., 2017). Another systematic review found that the patient's physician and general ward nurses' fear of being criticised by the RRT nurses also influenced when and if the nurses activated the

Characteristics 2016	Setting A	Setting B	Setting C
Total hospital beds	338	333	750
Total hospital admissions/discharges	22,000	30,567	95,600
Emergency admissions (% of all hospital admissions)	18,700 (85%)	24,759 (81%)	76,480 (80%)
ICU beds	9	13	12
ICU nurses total	65	100	74
RRT nurses	35 of 55	45 of 100	45 of 74
RTT calls/year (2016)	1130	400	1371

TABLE 1 Key features of three acute care hospital settings and their RRT respectively

Abbreviations: ICU, intensive care unit; RRT, rapid response team.

RRT (Padilla et al., 2018). Nurses' satisfaction with RRT nurses was found to be high, pointing at the RRT nurses as being helpful and a resource when caring for deteriorating patients (Halupa et al., 2018).

Evaluating the RRT is important to secure sustainability (Stolldorf, 2017). Exploring the role and function of the RRT nurse could be an important part of evaluation, serve to support the team and educate staff across the organisation. Yet, very few studies have focussed on RRT nurses' perceptions of being a RRT nurse, and of what it means to the RRT nurse working out of their primary working setting, leaving the ICU for parts of the working day and being at the frontline of critical situations. The few identified studies report that RRT nurses feel they are doing an important job (Donohue & Endacott, 2010; Tirkkonen et al., 2018). They believe that the most vital areas of knowledge needed for a RRT nurse are as follows: (1) clinical deterioration theory, (2) clinical deterioration skills, (3) RRT governance, (4) professionalism and (5) teamwork (Currey et al., 2018). To ensure that the RRT service is and continues to be the patient safety tool it was established to be, we need a deeper understanding of RRT nurses' perceptions of their role as a RRT nurse, of the team functioning, and intra- and inter-professional collaboration.

3 | AIM

The aim of this study was to explore and illuminate RRT nurses' perceptions of being a RRT nurse and their perceptions of the RRT function, including collaborative and organisational aspects of the RRT in acute care settings.

4 | METHODS

4.1 | Design

This was a qualitative study including data from focus group interviews with RRT nurses. The study is reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Tong et al., 2007; Appendix S1).

Focus group interview is a qualitative data collection method, used to collect data through deeper discussions and sharing ideas

amongst participants. The goal is to reach a further and deeper level of reflection as the participants inspire each other than would have been reached in individual interviews and to reach a shared understanding of the meaning of the phenomenon under research (Malterud, 2012).

4.2 | Setting

The study was conducted in three Danish regions in three acute care settings. Two of the hospitals, both regional, were very similar regarding number of beds and number of hospital admissions. The third, a university hospital, was approximately twice as large. The RRTs were established at the three hospitals in 2013, 2009 and 2007 respectively. Table 1 presents the three settings and their RRT including key figures of RRT use in 2018.

4.3 | The rapid response team at the three settings

The main features of the RRT team structure were similar across settings. (1) All three RRTs were nurse-led, and a specially trained and highly experienced ICU nurse answered RRT calls and left the ICU to make the first bedside assessment of the patient at the general ward. Occasionally, the RRT nurse informed the ICU consultant about the patient before leaving the ICU. (2) Bedside assistance of an ICU consultant was always at hand if needed, and (3) one or two RRT nurses were in charge of the team: educating new RRT nurses, passing on and receiving information to and from RRT nurses, collecting RRT call data, securing equipment, collaborating with and informing nurse ward managers at the general wards. In one setting, the RRT nurse cared for an ICU patient whilst also responding to RRT calls. In the two other settings, the RRT nurses did not have the main responsibility for an ICU patient on the days they served as RRT nurses, but were available to assist a colleague or they did administrative work. The hospitals' financial support for having a RRT in place or being a RRT nurse differed across the three settings, due entirely to the local context's managerial priorities and possibilities. In one setting, financial supplement had not been provided, on neither the ward nor the individual nurse level. In another setting, the ward had been given resources to staff day

and evening shifts with an extra ICU nurse, and in the third setting, all RRT nurses received a monthly bonus for being a RRT nurse.

4.4 | Sampling and data saturation

Rapid response team nurses were recruited for participation in focus group interviews at all three sites by open invitations available in their offices and lunchrooms and by referrals by the RRT nurse in charge. A purposive sample strategy was applied to assure a broad variety within representativeness of the three sites and participants' years of nursing experience, their years of ICU experience and age. Approximately 95% of Danish nurses are females. We aimed to recruit male nurses for participation and succeeded in recruiting one male RRT nurse. To secure data saturation, the first author listened to the recording of each interview and together with co-author (TCBH) discussed any new perspectives. They continued this process until no new information was being collected.

4.5 | Data collection and methodological details

From September 2018–February 2019, eight focus group interviews with RRT nurses took place at offices close to the ICU at all three included settings. These offices were situated at a distance of the ICU ensuring a peaceful atmosphere without disturbances or interruptions from ICU activities. The first author, a post-doctoral researcher at the time of the interviews, experienced in conducting focus group interviews and conducted all eight focus groups, acting as a moderator. All RRT nurses were ensured that they participated anonymously and that all obtained data were handed confidentially. In one of the settings, some of the participants knew the moderator and her research interest in the research topic, before study commencement. The aim of the study was presented and informed consent forms handed out for participants to sign. The following areas of interest were then presented: the RRT, the role of RRT nurse, the general ward nurse, the patient and the organisation. Starting each focus group, the moderator asked, 'When thinking back on the very first times you, being the RRT-nurse on duty, were called to assess a patient, what were your thoughts and feelings about this new part of your job at that time?' From there, the discussion went on, guided by the moderator and a loosely structured interview guide to ensure that participants during their discussions addressed all areas of interest (Table 2). All focus group interviews were recorded digitally and transcribed verbatim. The first author has extended knowledge of the RRTs in a national context, and an observer was present at five out of eight interviews to avoid researcher bias, and to observe group dynamics, secure in-depth discussions and ensure that all participants had the opportunity to be part of the discussions. Since the observer did not need to intervene at any time during the first five interviews, the need for her presence was judged unnecessary. For the final three focus groups, the moderator managed the group in the same consistent way as the previous five with the observer present.

TABLE 2 Interview guide exploring RRT nurses' perceptions of being a RRT nurse

- Why, in your opinion, is there a RRT at your hospital?
- Do you recall/know the original purpose of implementing a RRT?
- What was it like to become a RRT nurse? What did you think about it at that time and what do you think about it now? How do you feel about going on a call?
- How would you describe the tasks you carry out, when you are on a call?
- Please, describe a typical RRT call situation
- Has anything changed in the way you are a RRT nurse or the way RRT works?
- What in your opinion is the most important job/task of the RRT today?
- What does the fact that your hospital has a RRT in place mean to patients and relatives? Why?
- How does the RRT take care of the patients' interests?
- What does it mean to general ward nurses that there is a RRT in their hospital? How and why do you get that impression?
- How in your opinion, do general ward nurses perceive the RRT—how do they use the team? Does this vary?
- What do nurses approach you and what do they expect the RRT to do?
- Is there a need for adjusting mutual expectations?
- What are your thoughts about intra- and inter-professional collaboration during calls for the RRT?
- What in your opinion is the main obstacle for having a RRT that is functioning optimally?
- How have you experienced going out on visits without being called? Preventative visits.
- What does the hospital achieve from having a RRT?
- Could you point at any changes to how the RRT is organised and functioning that would improve any outcome of the RR

Abbreviation: RRT, rapid response team.

4.6 | Analysis

Data were analysed by a content analysis approach inspired by Graneheim and Lundman (2004). The transcribed focus group interviews were read through carefully several times by the first author to get an overview of the content. A co-author read three transcribed interviews. Both of them coded the first three interviews individually, line by line, where after they met to compare codes and discuss any divergent codes to reach agreement. When deciding on final codes, it was crucial that this label of a meaning unit represented an event, a perspective or other phenomena and could be understood in relation to the context (Graneheim and Lundman, 2004). Since there was only very little disagreement between coding suggestions, the first author completed coding the remaining interviews. Both authors sorted all final codes into subcategories individually and made suggestions to categories of the manifest content. Subsequently, they met to discuss their suggestions and extract an overarching theme, entailing and describing the latent content. The other two co-authors reviewed quotes and discussed the categories and the theme with the first author to ascertain these and made valuable contributions to their final wording.

TABLE 3 Participant characteristics (N = 27)

Characteristics	
Age—years median (range)	53 (35–65)
Gender (female)	26
Experience as a nurse—years median (range)	24 (8.5–41)
Experience as an ICU nurse—years median (range)	17 (3–39)
Experience as RRT nurse—years median (range)	7 (1.5–11)

Abbreviations: ICU, intensive care unit; RRT, rapid response team.

4.7 | Ethics

All participants were informed in writing and verbally about study aims before giving written informed consent. The first author assured participants that all the authors would handle data appropriately to secure confidentiality and anonymity. Furthermore, participants were assured that their participation was without any consequences from managers. Information how to contact the first author in case of questions, complaints or a wish to withdraw from the study within a specified timeframe was handed out before focus group commencement. All findings (theme, categories and subcategories and related quotes) were presented to participants and all their colleagues at a meeting at each site for them to reflect on and provide feedback to the authors, before the authors began writing the manuscript. There was overall agreement on study findings, and no alterations to the theme or categories were made. According to national law, the study did not need approval from the Regional Committee on Health Research Ethics.

5 | FINDINGS

Altogether, eight interviews, including 27 RRT nurses, were conducted, of which four took place in study setting B and two in study setting A and C respectively. The interviews lasted between 50–75 min. Characteristics of the 27 participants are presented in Table 3. None of the participating 27 RRT nurses expressed a wish to withdraw from the study afterwards.

Following a process of content analysis of both the manifest and the latent content in the data material, one theme, 'Balancing responsibilities, rewards and challenges', underpinned by six categories comprising 46 subcategories was identified. The theme, categories and subcategories are presented in Table 4.

An example of the data analysis process is visualised in Table 5.

5.1 | The theme

Balancing responsibilities, rewards and challenges entailed RRT nurses' overarching perceptions of the complex and multi-faceted task and their role being a RRT nurse. All participating RRT nurses were deeply aware of the responsibilities they carried being at the front-line of critical situations. They transitioned from fearing they could

take on the responsibility to feeling proud realising that they could. At the same time, being a RRT nurse rewarded them with feelings of helping out, having the right skills and engaging in fruitful collaboration. However, there were challenges to being a RRT nurse. For some RRT nurses, the challenges weighed heavily on their shoulders and comprised feelings of being misused in terms of doing other peoples' jobs. Other RRT nurses felt these challenges were minimised due to feelings of great meaningfulness in providing nursing and teaching to patients and healthcare staff in need of it, knowing that if they did not help this patient, and the nurse and young physician, who were responsible for the patient, nobody would.

5.2 | Categories

Becoming, developing and fulfilling the RRT nurse role described the process within the individual nurse from stepping into the role as a RRT nurse, feeling insecure of one's competence to gradually viewing oneself as a competent RRT nurse fulfilling an important and meaningful part of ICU nursing. Becoming a RRT nurse was a personal as well as a professional challenge. However, realising that being an experienced ICU nurse meant having the right skills and competencies, made the individual RRT nurses feel proud and gain self-confidence in taking on and fulfilling the job.

I thought it was nerve-wracking. I dreaded going around with that phone, and not knowing what they were calling about, I didn't know if it would be something I could handle, and yes, to that extent it took me out of my comfort zone.

(Focus group 6)

I remember having a stomach ache when I went out to my first calls and thought "Oh my goodness," but then you get that sense of achievement when you get there.

(Focus group 8)

Throughout this process, awareness arose of the great responsibility they were carrying, the boundaries for their individual clinical assessment and judgement skills, and their competence to deliver safe care. Therefore, having back up from an ICU physician and knowing that they could always rely on his or her respectful assistance was crucial for their positive perceptions of their role as a RRT nurse.

We feel confident that when we call our doctors, they'll come. Yes. They always do. And if they can't, then they'll send someone else.

(Focus group 7)

Fulfilling the role as a RRT nurse provided nurses with professional satisfaction. They used their competencies and skills together with the working habits they had gained from being experienced ICU nurses.

TABLE 4 Theme, categories and subcategories

Theme	Balancing responsibilities, rewards, and challenges	The RRT call at its best	The obvious and the subtle RRT tasks	Carrying the burden of RRT	Organisational benefits and barriers for an optimal RRT
Categories	Becoming, developing and fulfilling the RRT nurse role	Helping patients as the core function of RRT	The RRT call at its best	Carrying the burden of RRT	Organisational benefits and barriers for an optimal RRT
Subcategories	Facing a personal and professional challenge Doubting at first, but having the competencies Gaining self-confidence Feeling proud Developing greater insights Getting aware of professional responsibility and boundaries Using ICU competencies, skills, and working habits Having ICU back-up Feeling professional satisfaction Being open-minded Taking the leading role	Focusing on the main problem Involving patients Doing the unpleasant tasks Securing patient safety and dignity Understanding the entire patient situation Planning patient care	Mutual respect and acknowledgement Collaboration and dialogue Clinical advice and coaching A calm and secure atmosphere Involving in inter-professional collaboration Stabilising patients Popping the End-of-life-care question Providing basic clinical nursing Teaching and training nurses Taking extended responsibility Covering for the lack of resources Being the ICU gate keeper	Meeting helpless, abandoned general ward medical and nursing staff Feeling misused as a RRT nurse Doing other peoples' job Putting the ICU patient aside Handling being here and there Meeting unfair expectations and pressure	Improved patient outcome Improved staff skills Economic savings Successful cultural change Devastating working conditions in the general wards Management letting patients and staff down No basic training in the general ward Missing the general ward physicians at calls Delayed calls Having patient responsibilities in the ICU No economic support

Abbreviations: ICU, intensive care unit; RRT, rapid response team.

Well, I was nervous the first times I had to go out... but I was really surprised to discover that I was genuinely able to help. I thought, wow, you know? It really does make a difference, the experience you don't normally think of as valuable, because what exactly have you just learnt? But you could really tell, in the situation, that you could ask about things, and pretty quickly find out what the patient....

(Focus group 4)

The RRT nurses always aimed at meeting the general ward nurse with an open mind in order to listen to and respect his or her judgement of the patient situation. However, they were aware of their leading role when being involved in both intra- and inter-professional collaboration. Being a teacher and a coach were described by the RRT nurse as important and satisfying parts of their role.

Well, I also think it's enormously satisfying when they (the general ward nurses) have learnt something new from it (the discussion during the RRT-call) as well, and say: "Okay and we've talked about being able to use this in another situation in relation to so and so." I really think that gives incredible professional satisfaction.

(Focus group 1)

Helping patients as the core function of RRT reflected a serious professionalism of RRT nurses and major focus on the patient. Nurses described that during each call, they would focus on the patient's needs and main problems before addressing the nurse's need for practical help, and they would use this approach as a strategy to secure all patients of safe and dignifying care. In doing so, they aimed at understanding the entire patient situation and made thorough reflections about how they could help the patient and thereby help the nurse and physician, who had called. If possible, they involved the patient in their reflections and decisions when planning patient care.

I start by asking a few questions about what is going on. If the patients themselves can participate, then they are allowed to do so as much as they possibly can.

(Focus group 6)

This complexity [in the patient situation] also means that there is a focus on, or a need, to look at the patient as a whole. The word "holistic" can certainly have a religious and alternative ring to it, but I actually think there are so many different things that contribute [to the situation].

(Focus group 8)

At times, the RRT nurse would be the one to do tasks such as tracheal suctioning, and they balanced this obligation by taking both the issues of patient safety and dignity into consideration.

TABLE 5 Example of the process of analysis going from codes to subcategories, categories and theme

Theme	Balancing responsibilities, rewards and challenges		
Categories	Helping patients as the core function of RRT	Carrying the burden of RRT	
Subcategories	Understanding the entire patient situation	Meeting helpless, abandoned general ward medical and nursing staff	
Code examples	Focusing on the main problem	Meeting unfair expectations and pressure	
	Patients are chronically ill and acutely unwell Asking how the patient is at home Providing a plan for the patient	Young nurses under tremendous pressure Young nurses under tremendous pressure Feeling touched by the young nurses' situation Immediately recognising patient deterioration Always helping the patient	Used as a substitute for experienced physicians Annoyance and stress by being a RRT nurse Sadly nurses lack basic nursing competences Young physicians asking for coaching

Abbreviation: RRT, rapid response team.

The RRT call at its best illuminated RRT nurses' perceptions of the importance and meaningfulness of working together in a small team to help patients and their families. For RRT calls to work at their best, mutual respect and acknowledgement of each other's competencies and evaluations of the patient situation were described to be fundamental. Very often, these components of collaboration were present.

That this is what we're doing in our daily life [at the ICU], but I also think that what is very rewarding is that.... interaction we have with colleagues around the hospital, whom we don't work with [on a daily basis]. The acceptance of what we.....well, and the acknowledgement that we're there as a resource, which makes you grow in what you do. Receiving that acknowledgement when you go out [on RRT-calls], being able to discuss things with one another, even though we...I am in one setting, and they are in another.

(Focus group 8)

Rapid response team nurses reminded themselves to take general ward nurses' worries seriously and to recognise worry as a reason for calling the RRT.

Well, it is important that there is good cooperation, and you have to take it seriously when the nurse calls us – she does so because she is worried, and that is actually a good enough reason, they can actually call us when they're worried. And this worry is genuine for that nurse. It may well be that sometimes we think it's silly, but that's because our world looks quite different. Therefore, you have to go up there with an open mind and say: "Right, now we'll look at this patient, and we'll calmly assess all the organ systems", and then we take all vital signs.

(Focus group 2)

A successful RRT call was characterised by collaboration and dialogue and by taking place in a calm and secure atmosphere where the RRT nurse was able to deliver both practical help and guidance in a professional and pedagogical way. Helping the general ward nurses and physicians to be in control of the clinical situation, and feeling confident with care plans were important aspects of a successful call, when evaluated by the RRT nurses.

I also think they discover that we can help make a difference.

(Focus group 7)

The obvious and the subtle RRT tasks illuminated that the RRT nurses described different kind of tasks. Stabilising patients and teaching nurses, and at times young physicians, how to handle deteriorating patients were some of the obvious tasks.

But I also think they often use us a lot as coaches or supervisors, and I think, it's often the young, inexperienced doctors, who are up there, relying on us for support to a huge extent.

(Focus group 5)

More subtle tasks included providing basic clinical nursing, covering for the lack of general ward nursing resources by helping out with practical patient-centred tasks not requiring ICU nursing experience or competences.

We're asked to help with certain tasks where I just think, well, they could have done that by themselves. "Can you come and do a tracheal suction?" "Yes, of course, but you should be able to do it yourselves." That sort of thing, you know, where I.....it takes up a lot of my time. These are some of the issues [about RRT],...Then you get annoyed about it.

(Focus group 7)

I think these days they call more often about minor issues than they used to. Little things, which I believe they could have solved themselves. Yes. Just by discussing it with each other.

(Focus group 7)

Many minor calls for the RRT were perceived as time consuming. Furthermore, some RRT nurses pointed out that they were the subtle gatekeeper to the ICU. During the focus group interviews, RRT nurses engaged deeply in discussions about their role in end-of-life-care decisions. The RRT nurses often experienced that the physician in charge of the individual patient's care had not raised the question regarding end-of-life care and discussed the patient's wishes in collaboration with the patient and relatives. Therefore, during deterioration, RRT nurses felt obliged to ask about and make the physician reflect on end-of-life-care plans for both ethical and practical reasons. This was often a source of great concern and distress.

For many, many years it's been a dream of mine that they [general ward primary care team] would get better at deciding when to end treatment and when to initiate end-of-life care. It's.... I've found it to be a huge problem when I go out as a RRT-nurse. For example, one night I participated in initiating end-of-life-care for three patients, when they'd called the RRT-nurse to attend to something completely different.

(Focus group 1)

Carrying the burden of RRT described the less favourable challenges of being a RRT nurse; meeting general ward nurses and physicians whom RRT nurses described as helpless and abandoned, a description

rooted in the understanding that nurses and young physicians lacked an experienced colleague nearby whom they could ask for advice and support.

I think there are so many young ones [nurses and physicians] who carry an enormous responsibility and who find it very difficult to overlook all of it. This [overlooking a clinical situation] I believe, has become part of our function. And I really think that this hospital would be in great trouble, if we were not around.

(Focus group 5)

We meet these young nurses who are in deep trouble [they do not know what to do], and I actually think it's fundamentally not okay that the RRT is used for that. I mean, I think it's just not okay, because we see how they're left on their own due to not having received proper training and there are not enough staff. I think, when we go out as RRT-nurses, there are so many things that have not been handled properly by senior management. It's just not right that we're being used for this [solve these problems].

(Focus group 1)

A recurring issue for the RRT nurses were the devastating conditions in the general wards, which they regarded as organisational challenges and not the responsibility of individual clinicians or ward managers. Besides stressing the general ward staff, the circumstances also challenged the RRT nurses resulting in ambivalent feelings towards being a RRT nurse. Some RRT nurses described being filled with sadness about these situations. Of course, they wanted to help the patient, the nurse and the physician, but they felt distressed about the fact that young nurses and physicians were left to work under these circumstances and to realise that without RRT, they would be lost. Feelings of distress, sadness and anger were expressed together with a more pragmatic feeling of indispensability, because if the RRT did not help, then nobody would or could, at least not within a decent timespan.

[being a RRT-nurse] you go out to help someone whom no one else would have helped. I like doing that. I often find it meaningful.

(Focus group 5)

The RRT nurses described situations where they were met with what some perceived as unfair expectations from physicians to engage in clinical decision-making about medication prescriptions or how to approach end-of life-care situations. Having to coach physicians on this level was either perceived as resembling their 'normal' obligations in the ICU, as challenging but still meaningful, or as

being too demanding and placing RRT nurses out of their comfort zone, and therefore in some cases to be an inappropriate part of the RRT nurse's tasks. An overall unsatisfactory feeling of doing other people's job instead of caring for ICU patients was expressed and debated against perceptions of the meaningfulness in general ward nurses' and physicians' right to call the RRT no matter what the patient-related problem was.

But, I also think...I very often find that we, the RRT-nurses, are... I do not know if I can allow myself to say misused, or at least not used the way the RRT, in my view, was intended to be used. I don't have the authority to prescribe medication, and very often I'll be called by a young physician who expects me to be a supervisor, or who are on their own and unable to proceed [without counselling]. Of course, it's kind of okay to need a supervisor, but until the registrars/consultants join them, they sometimes expect us to tell them what to do.

(Focus group 1)

Organisational benefits and barriers for an optimal RRT represented that having a RRT in place was perceived as beneficial to the organisations in terms of improved patient care, resulting in better patient outcome. Improved nursing skills were also perceived as a positive outcome resulting from the RRT teaching and coaching nurses over the years.

But it is quite true that it [the RRT-function] has changed enormously in the 10 years we've been doing RRT. In the beginning, they [the general ward nurses] had no idea what to do, whereas now suddenly... you may very well experience when getting out there, that actually, you don't have anything to contribute because they've done it all. It's fantastic. So, you just pat them on the back and say: "Very well done! The patient is stable now, so I'll be off again. You've done exactly what we've been telling you all along," right?

(Focus group 5)

Altogether, having a RRT was perceived as a means of saving money due to the team's success in stabilising patients in the general wards and preventing unnecessary ICU admissions. Implementing a RRT in the acute care setting was believed to have promoted a cultural change. Sharing responsibility for patient care and helping each other across units had become much more acceptable and now regarded as a natural part of daily practice.

But one thing I find really, really positive is when you meet colleagues [general ward nurses] on the hospital premises, you recognise each other, and you say

"hi there" and we know we've been through something together from a RRT call. I find that incredibly pleasant.

(Focus group 1)

Having patient responsibilities in the ICU was perceived as an organisational barrier for an optimal RRT.

But, when it's busy, one's heart is sometimes somewhere else. Therefore, you need to be very conscious of maintaining focus when you're on a call, knowing in the back of your mind... that you actually have many other tasks to take care of too [back at the ICU].

(Focus group 2)

But I think that one of the most difficult things is when I'm caring for an ICU patient, who is really too unstable for me to leave, and then I have to respond to the RRT-phone. That stresses me.

(Focus group 6)

Missing the general ward physician at calls due to a heavy workload on the responsible physician was perceived as a barrier for a professional RRT. Both barriers hampered patient care due to delayed clinical decision-making.

They may have been told to remember that the doctor should take part in the RRT-call, but they might think: "Well, he's a little stressed but he'll be fine." Then we're standing there and I'll say, "If I'm here, then the doctor should be here too." Because it's serious. It's supposed to be teamwork and I cannot prescribe anything, so there has to be a doctor here. So then they'll call him again.

(Focus group 3)

6 | DISCUSSION

This study explored RRT nurses' perceptions of the nurse-led RRT and of being a RRT-nurse. We aimed to illuminate what it means to RRT nurses in a broad sense to take on and fulfil their role, and to conduct and be involved in professional RRT tasks. Besides relating our findings to previous study results reflecting general ward and RRT nurses' perceptions of the RRT, we will frame the discussion of the study's main findings in the light of nurses' professional identity defined as the perception of oneself in relationship to the work that one does (Landis et al., 2020).

In our study, one overarching theme: *Balancing responsibilities, rewards, and challenges* expressed the complexities of being a RRT nurse. RRT nurses perceived their role to influence their professional

life deeply. The role entailed elements, which supported and pushed forward personal and professional development. Fulfilling the role resulted in contradicting feelings and encompassed a wider range of aspects besides the more straightforward and simpler description of the role as providing care and stabilising patients according to ABCD principles. Early research investigated the role and tasks of the newly implemented ICU outreach nurses and liaison nurses, resembling RRT nurses involved in our study (Endacott & Chaboyer, 2006; Top et al., 2006). Ten years later, a quantitative study assessed the role of nurses in an ICU-led team comprising both an ICU physician and ICU nurse (Topple et al., 2016). This study was important to guide educational efforts to ensure that RRT nurses achieved the required competences. In our study, stabilising patients and providing acute care interventions to deteriorating patients, especially those facing airway and breathing problems, were considered the most obvious RRT task along with educating nursing staff. These findings are similar to the ones from the aforementioned early explorations into what RRT nurses do when called (Endacott & Chaboyer, 2006; Topple et al., 2016).

Years have passed since the RRTs and similar teams were first implemented, and RRTs have matured. The increasing shortage in nursing staffing, the simultaneous growing complexity of hospitalised patients' chronic conditions and the subsequent care needs, has changed the working conditions for all clinicians in acute care hospitals including those of RRT nurses. Currey et al. reported that RRT nurses believed clinical deterioration theory and skills, together with governance, professionalism and teamwork to be crucial competences for future RRT nurses. Therefore, these competences should be prioritised and addressed in structured education of RRT nurses (Currey et al., 2018). In a qualitative study using interpretive phenomenology, Landis et al. identified four themes answering the question of what professional identity means in the lived experiences of nurses. The four themes were (1) Expert validation, (2) Valued member of a team, (3) Patient advocacy and (4) Valuing humanness (Landis et al., 2020). When elaborating and discussing our study findings in the light of the concept of professional identity, we found several aspects of this concept represented in this study's theme and categories. Our theme reflected that RRT nurses viewed their role as helping patients and their general ward colleagues by taking on responsibilities as an expert. During the process of professional and personal development, expressed in the category *Becoming, developing and fulfilling the role as a RRT nurse*, RRT nurses became aware of their professional responsibility, their knowledge and skills, but also the boundaries for their professional actions. They became confident in fulfilling the role and it shaped their professional identity as experts, which included taking on the leading role and teaching or coaching general ward staff. When acting in the role as RRT nurses, they felt validated, acknowledged and rewarded as an expert by patients, colleagues and physicians, which according to Landis were important components of nurses' professional identity (Landis et al., 2020). Furthermore, working in a team as a trusted member and trusting other team members was in our study a rewarding experience of being a RRT nurse and likewise identified as

a component of professional identity. Being a valued team member as a RRT nurse, helping patients and families as well as supporting and coaching general ward staff was found to be highly meaningful to RRT nurses, and supported their identity as RRT nurses, making them trust in that they fulfilled the intension of the RRT function. The aspect of RRT nurses' deliverance of indirect nursing defined as teaching, coaching, and other collaborative actions have been addressed reporting that general ward nurses perceived RRT nurses' non-technical skills to be very important, and to deliver support to general ward nurses (Chaboyer et al., 2005). However, an Australian mixed methods survey revealed that although both RRT nurses and general ward nurses viewed non-technical skills such as cooperation and communication to be important, these skills were lacking in both groups of nurses, as judged by the other group (Chalwin et al., 2016).

The third and fourth components of professional identity as described by Landis were advocating for patients and valuing humanness. We found that RRT nurses perceived themselves as the patient's helper expressed in the category: *Helping patients as the core of RRT*. RRT nurses were occupied with what was best for the patient, and they were advocating for patients when being the ones addressing end-of-life-care questions. This was in our study experienced as a necessary and accepted task or as a challenging part of the RRT role, but without doubt a very common task, which is in accordance with other studies. Silva et al. found that end-of-life decisions were part of 24% of MET activations (Silva et al., 2016). Kim et al. (2020) found that many decisions of limitation of treatment were made in connection with RRT calls, and so did Jäderling et al. (2013) who also found that this did not preclude repeated visits from the team. Although supporting end-of-life care in the ward is an important part of the RRT, to optimise patient care, conversations with patients about preferences and end-of-life decisions should ideally be made as early as possible and in a stable period of the patient's illness trajectory instead of during a RRT call (Brighton & Bristowe, 2016; Pattison et al., 2015).

The challenges embedded in being a RRT nurse defined in the category; *carrying the burden of RRT* represented that being a RRT nurse was at times burdensome due to feelings of doing other people's job and not being acknowledged for this effort, and of being overloaded. Shortage of experienced nurses in the general wards combined with an increasing number of general ward patients facing complex care needs have resulted in RRT nurses being used, more or less transparently, to help solve patients' basic care needs. In fact, fearing that hospital managers calculated with and counted on RRT nurses to fill in a gap in nursing staffing at general wards made some RRT nurses very distressed. These findings are somehow similar but also in opposition to findings in a study by McNeill et al., (2019). Their findings revealed that RRT nurses appreciated having an extended role including providing clinical support and educating nurses during critical situations, as long as it happened in a transparent manner and as a visible measure to deal with a lack of experienced nursing staff in the general wards. In our study, RRT nurses' feelings of setting the ICU patient aside to fulfil RRT obligations, and of facing heavy workloads were also identified and supported by others. Wang et al. (2013) reported that ICU nurses felt

ICU care was compromised when a nurse attended a RRT call. In a study by Tirkkonen et al. (2018), RRT nurses felt their workload to be heavier than that of their ICU colleagues who were not doing RRT. In a qualitative study with RRT nurses and physicians, clinicians addressed the issue of extended workload due to spending time away from other patients (Benin et al., 2012).

Rapid response team nurses' perception that general ward nurses have learned how to react to patient deterioration from participating in RRT calls and that these improved nursing skills inevitably benefit the hospital organisation has yet to be examined in future studies. However, despite a lack of knowledge amongst RRT nurses of the evidence of RRTs, RRT nurses strongly believed that the RRT was beneficial to the organisation by stabilising patients, preventing in-hospital cardiac arrests and ICU admissions, thereby reducing costs. These perceptions are in line with a number of systematic reviews supporting the benefits of RRTs (Garry et al., 2019; Solomon et al., 2016).

7 | METHODOLOGICAL RIGOUR AND STUDY LIMITATIONS

Trustworthiness of this qualitative study and its findings was aimed for by addressing the four elements embedded in trustworthiness: credibility, dependability, confirmability and transferability (Graneheim et al., 2017; Graneheim & Lundman, 2004). The first author has extended knowledge of the RRTs in a Danish context. To enhance credibility and avoid researcher bias, a co-author with only very little knowledge of the RRTs was involved in data analysis. A second co-author with RRT expertise from a different international context and a fourth co-author with only little knowledge of the RRTs were able to ask valuable questions to discuss and clarify study findings. Three out of four authors were very experienced with qualitative research methodology.

To ensure dependability, the first author conducted all focus group interviews within five–six months and structured all used the same interview guide. To enhance confirmability, we present rich quotations to underpin study findings and we have strived to present the study contexts as accurate as possible for readers to decide on transferability of findings to their context.

The fact that focus group participants were near colleagues may have compromised data confidentiality and participants' anonymity throughout the study. The authors addressed this advocating that all participants respected the focus group as a 'confidential room'.

A strength of this study is that it includes participants from three acute care settings with similarly organised RRTs but situated in three different regions in one country.

8 | CONCLUSION

Being a RRT nurse is a professionally complex role, fluctuating from being responsible, capable and rewarded to being uncertain and deeply challenged. These factors contribute to RRT nurses'

perceptions complexity and their professional identity as a RRT nurse. RRT nurses go through both individual and professional development processes to fulfil their role and undertake a wide range of tasks that arguably benefit the patients and the organisation. The complexity and the tensions of the role may prove burdensome to some RRT nurses and prevent long-term sustainability. Enabling professional fulfilment through further education and support may mitigate some of the stressors experienced by RRT nurses.

9 | RELEVANCE TO CLINICAL PRACTICE

These findings provide valuable knowledge to managers at different levels to consider when recruiting and educating new RRT nurses, and when striving to create a working environment that will maintain or increase RRT nurses' job satisfaction.

Furthermore, this knowledge is important as a means to guide managers and clinical developers on to which developing initiatives to implement and how to underpin and sustain the benefits already provided by the RRT. Hospital managers' recognition and acknowledgement of RRT nurses' role and involvement in providing basic nursing activities and covering for the gap in nursing staff resources is an important area to address to maintain RRT nurses' job satisfaction and to develop the RRT. Likewise, it is the role of RRT nurses in end-of-life-care issues. Further research into pros and cons of RRT nurses' participation in these issues from different perspectives is needed.

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CONFLICT OF INTERESTS

All authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and meet at least one of the following criteria: substantial contribution to conception and design, data collection or data analysis and interpretation, and drafting the article or revising it critically for important intellectual content.

DATA AVAILABILITY STATEMENT

Data available on request from the authors.

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