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Professionalising theatre nursing: Educational reform and institutional change in Norway, 1975–2025

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Theatre nursing in Norway has developed from a practical skill shared by all nurses into a distinct and long-standing speciality. By the early twentieth century, dedicated nurses had already begun working exclusively in operating theatres, making theatre nursing the oldest hospital-based nursing speciality in the country.[i] Despite this deep-rooted tradition, formal education in theatre nursing is a relatively recent development. A national curriculum was not introduced until 1975, and it was only in 1999 that theatre

nursing education was integrated into the university system. In 2022, the first master's degree in theatre nursing was established, marking a new phase in the professionalisation of the field.

This article explores two key questions. What led to the transition from on-the-job training to formal hospital-based education in 1975? And what changes have occurred in the shift from hospital-based to university-level education from 1999 to the present? This research contributes to the field of nursing education by offering a historical analysis of how theatre nursing in Norway has evolved from an apprenticeship to an academic discipline, highlighting the profession's role in shaping its own educational structures.

This study employs a qualitative historical approach, utilising document analysis as its primary method. Inspired by Asdal and Reinertsen's practice-oriented approach, the analysis focuses on identifying values, norms and professional understandings as expressed in educational documents and professional texts.[ii] The material consists of both original documents and digitised copies from the National Library's collections. These include curricula, public regulations, professional articles, internal letters, and educational policy documents. The documents were selected based on their normative function in the development of theatre nursing education and their connection to key actors such as the Norwegian Nurses Association (NNA), the Theatre Nurses in NSF (ONSF), the Directorate of Health, and the Ministry of Education. Primary sources include archival documents from the NNA and its subgroup for theatre nurses, Operasjonssykepleierne i Norsk Sykepleierforbund (ONSF). Additional sources include digitised materials from the National Library of Norway, such as articles, reports and official documents. Five national curricula have been identified: two developed by ONSF in 1975[iii] and 1989,[iv] one by the Norwegian Directorate of Health in 1982 that was never implemented and is therefore treated here as a historical draft rather than an operative curriculum, positioned after 1989 because it had no regulatory effect, [v] and two university-level framework plans from 1999[vi] and 2005.[vii] The most recent regulation, from 2021, sets out national learning outcomes and functions as a binding curriculum.[viii]

To provide historical context, articles from NNA's periodical, *Sykepleien*, and relevant nursing textbooks have been reviewed. Particular attention is given to chapters authored or co-authored by theatre nurses, as these offer insight into how the speciality has been articulated and developed from within the profession.

The documents are evaluated with regard to the author's position, institutional affiliation and purpose of publication. Emphasis is placed on identifying potential conflicts of interest, power relations and rhetorical strategies that may have influenced the content. For example, the absence of theatre nurses on certain committees, such as for the Directorate of Health's curriculum from 1982, is analysed as an expression of professional marginalization.

The analysis of this material is conducted by way of thematic coding and focuses on the following analytical categories:

- professional identity and role understanding
- learning outcomes and knowledge base
- values and ethical principles
- educational level and academic status
- relationship to other professions and institutions.

These categories were developed iteratively in interaction with the material and have served as guiding tools for identifying continuity and change over time.

As a researcher with a professional background in nursing and theatre practice, I am aware of how my own practical experience can influence the interpretation of the material. In line with Gadamer's hermeneutic philosophy, I acknowledge that my background as a theatre nurse not only carries the potential for bias but also enables a deeper understanding of the subject matter. This pre-understanding, when made explicit, serves as a valuable interpretive resource rather than a limitation.[ix] To further counteract potential biases, the analysis is grounded in clear methodological principles and supported by triangulation across different types of sources.

Historical Context

The development of modern surgery was driven by two major breakthroughs: the introduction of anaesthesia (chloroform in 1847 and ether shortly afterwards)[x] and Joseph Lister's antiseptic principles in 1867.[xi] These innovations required personnel to administer anaesthesia and maintain sterile environments – roles that, in Norway, came to be performed by trained nurses. Ether was used in Norway from 1847 and chloroform from 1848.[xii] Lister's method, using carbolic acid, was introduced in Norway as early as 1868.[xiii] Initially, infection control was based on antiseptic techniques, but with the rise of bacteriology, aseptic methods gradually became standard. By 1877, Norwegian nurses were

already responsible for administering inhalation anaesthesia, applying antiseptic procedures and assisting surgeons, as documented in Rikke Nissen's foundational nursing textbook.[xiv]

The growing number of surgical procedures led to the construction of new hospitals with dedicated operating departments and restricted access to prevent infection.[xv] Norwegian nursing and surgical environments were internationally oriented, influenced by study abroad and international literature.[xvi] This international orientation likely enabled developments in Norway to closely parallel those in Central Europe and the English-speaking world.[xvii] By the 1920s, theatre nursing had become a distinct speciality, with nurses working exclusively in operating departments. One notable difference from the UK and the USA was that anaesthesia in Norway remained the surgeon's responsibility, although administered by theatre nurses.[xviii]

Only trained nurses could become theatre nurse apprentices. As pupils, they spent extended periods in operating departments, where they observed and practised aseptic techniques, assisted in both sterile and coordinating roles and eventually administered simple anaesthetics. This extensive hands-on experience made theatre nursing a familiar and integral part of their professional formation.[xix] By the mid-20th century, theatre nursing had evolved into three distinct roles: the sterile nurse assisting with the surgical wound, the coordinating nurse (previously referred to as the unsterile assistant) responsible for logistics, safety and communication, and the nurse anaesthetist. Pupils kept detailed logs of administered anaesthesia and learned surgical instrumentation.[xx]

The post-war period brought significant changes to Norwegian nursing, particularly within theatre nursing. These developments sparked debate over whether theatre nursing represented a branch of professional nursing or merely constituted technical assistance under physician supervision. The 1948 Nursing Act, implemented in 1949, established three-year nursing education leading to registration. Theatre nurses were now registered nurses who completed an internal apprenticeship: one year at a community hospital and two years at a Red Cross hospital.[xxi] Only three nursing specialities – midwifery, public health and psychiatric nursing – received national curricula. Psychiatric nursing was prioritised to elevate its status and attract more applicants, particularly men.[xxii]

A major shift occurred in 1948 when, inspired by developments in England, anaesthesiology became a recognised medical speciality in Norway.[xxiii] Theatre nurses, who had long administered anaesthesia,

began to specialise further. The phrase ‘a born anaesthesia nurse’ gained popularity.[xxiv] With advances in surgery and anaesthesia, the mastery of all three roles – sterile, unsterile, and anaesthetic – became increasingly unsustainable. Theatre nurses themselves recognised this limitation.

Collaboration between theatre nurses and anaesthesiologists was essential due to a shortage of medical doctors specialising in anaesthesia.[xxv] Although the NNA formally recognised anaesthesia nursing as a separate speciality in 1965, many hospitals continued to cross-train theatre nurses well into the 1970s and beyond.[xxvi] While this division between theatre nursing and nurse anaesthesia led to improved quality in both fields, it also introduced new challenges. Norway was already grappling with a nationwide nursing shortage,[xxvii] and theatre nursing in particular struggled to attract new recruits. At the same time, other countries began replacing nurses in operating theatres with technicians, initially in military contexts and later in civilian hospitals.[xxviii] Would Norway, under similar pressures, eventually follow the same path?

Proponents of operating room technicians argued that a full nursing education was unnecessary for technical tasks. They proposed a shorter programme focused on aseptic technique and sterilisation – two to two and a half years compared to five years for a theatre nurse.[xxix] However, the issue was more complex. Nursing education was transitioning in Norway to the post-secondary level under the Ministry of Education and Research, whereas technician training remained at the secondary level. This widened the educational gap to five and a half years.[xxx]

In summary, theatre nursing faced several challenges: a lack of standardised training across hospitals, ongoing recruitment difficulties and nurse shortages, and uncertainty over whether theatre nursing constituted ‘real’ nursing or merely technical assistance. Theatre nurses actively shaped their professional identity in response to these challenges.

Theatre nurses’ response to challenges in the discipline

Theatre nursing in Norway was originally structured as an apprenticeship programme at individual hospitals. Despite this decentralised approach, the foundation of this training remained consistent: basic nursing education. Although the Nursing Act, which ensured standardised education, was not enacted until 1949, the same textbooks had long been used across institutions. Furthermore, several non-profit organisations such as the Red Cross provided nursing education nationally, contributing to a shared foundation.

The NNA, although a trade union, has always prioritised the quality of nursing care. Its influence, along with that of its affiliated interest groups, has played a crucial role in shaping the profession. In 1950, the predecessor to today's interest group for theatre nurses was established. The primary ambition of this group, the ONSF, was to define the role of the theatre nurse, not only within Norway but also in alignment with developments across the Nordic countries.[xxxi] Several influential theatre nurses joined this initiative, including Borghild Hillestad. Like many of her peers, Hillestad undertook study trips to the United States to learn about American nursing and theatre nursing practices.[xxxii] In 1956, she authored the first Norwegian textbook on theatre nursing, *Operating Theatre Technique*.[xxxiii] Although written for practising theatre nurses, the book was also used as a teaching resource in apprenticeship programmes. The most widely used textbook in Norway, however, became Edyth Alexander's *Operating Room Technique*,[xxxiv] which was regularly updated.[xxxv] This outward-looking approach helped maintain Norwegian theatre nursing's alignment with international standards and evolving global trends in theatre nursing practice.

A persistent challenge was the shortage of trained nurses willing to pursue further specialisation in theatre nursing. This was seen as a serious threat to the Norwegian healthcare system. In response, head nurse Astrid Saltnessand developed a local educational programme at the hospital in Tromsø in 1965. By 1971, she was part of a national committee undertaking to establish a standardised curriculum for theatre nurses.[xxxvi] In 1973, she co-authored a letter advocating for the education of operating room technicians.[xxxvii]Although this appeared to be a shift in her stance, she later explained that it was an act of desperation due to a lack of resources.[xxxviii]

Was the education of operating room technicians the best solution to the shortage of theatre nurses in Norway? A letter from ONSF leader Sylvia Gjendem to Anne Simonsen, the director of education at the Tromsø hospital, sheds light on this debate. Although Simonsen's original letter to Gjendem has not been preserved, a personal note indicates that she had sent a copy of the letter to the editor of the newspaper *Nordlys*. In this published letter, she argued that the shortage of qualified personnel stemmed from a lack of structured education and poor working conditions. Addressing these issues, she claimed, would yield both professional and economic benefits and ultimately improve recruitment.[xxxix]

ONSF had begun working on a national educational curriculum in 1952, which underwent numerous revisions before being completed in its final version in 1975. Gjendem referenced this work in her letter to Simonsen, emphasising the importance of grounding the curriculum in nursing philosophy. Surgical

patients, she argued, required basic nursing care while sedated and unable to advocate for themselves. Nurses possessed the knowledge to ensure continuity of care throughout the perioperative process, from the preoperative ward to the operating theatre and on to postoperative recovery. Gjendem also questioned whether the term ‘operating theatre technique’ should be replaced with ‘operating theatre nursing’, noting that in this context, technique referred to evidence-based nursing practice.[xl]

The first educational curriculum (1975)

The first formal curriculum for theatre nursing was developed by ONSF in 1975. The committee included two practising theatre nurses, two educators and one representative from NNA.[xli] It was implemented in several hospitals as part of their internal training programmes and classified at secondary school level.[xlii] In addition to outlining the structure and content of the programme, the curriculum also specified qualification requirements for teaching staff in all subject areas.

The curriculum was grounded in Christian and humanitarian values and framed theatre nursing as an advanced specialisation based on general nursing education.[xliii] Theatre nurses were defined as integral members of the surgical team, responsible for maintaining hygienic standards, ensuring continuity of care throughout the perioperative period, and safeguarding patients’ dignity and autonomy. Both the sterile and coordinating roles were seen as nursing functions not reducible to technical tasks.

The programme emphasised evidence-based practice, drawing on nursing research as well as medical, natural, social and humanistic sciences. Core objectives included patient safety, holistic care and adherence to antiseptic and aseptic principles. Theatre nurses were expected to take personal responsibility for upholding professional standards and promoting patient participation.

The theoretical component covered nursing theory, the perioperative nursing process and the role of the theatre nurse in a technologically advanced environment.[xliv] Such topics as leadership, administration and educational responsibilities were also included.

Practical training consisted of sterile and coordinating functions.[xlv] In the sterile role, pupils learned to manage surgical instruments, maintain aseptic technique and prevent complications such as hypothermia.[xlvi]In the coordinating role, they prepared the theatre, positioned patients safely, managed equipment, supervised staff and ensured continuity of care through effective handovers. Coordination also involved planning upcoming surgeries and collaborating closely with the sterile nurse to maintain accurate counts of instruments and materials.

Instruction was delivered by professionals with qualifications tailored to each subject area. Hospital administration and management were taught by nurses with advanced training from NNA's school for further education, typically head nurses in operating departments. Medical subjects were taught by physicians or other subject matter experts. Antiseptic and aseptic principles, as well as theatre nursing itself, were taught by experienced theatre nurses. Pedagogical subjects – including study techniques, guidance and mentoring – were taught by nurses with formal teaching qualifications from NNA's educational programmes. Instruction in medical–technical equipment and other nursing specialities was delivered by professionals with expertise in their respective fields.[xlvii]

This curriculum represented a milestone in the professionalisation of theatre nursing, laying the foundation for future academic programmes and firmly establishing the role as nursing speciality rather than a technical support function.

The second educational framework (1989)

In 1984, NNA initiated a project to compare the various internal educational programmes for specialist nurses across Norwegian hospitals. The project concluded that a unified framework plan was necessary for all nursing specialities working with acutely and critically ill patients. As a result, a national framework was developed that combined shared core topics with discipline-specific content. The working group responsible for this plan included two representatives from each speciality and a secretary from NNA.[xlviii]

This development coincided with a broader shift in Norwegian nursing education. Between 1981 and 1986, all nursing schools were elevated from tertiary vocational colleges to university colleges, and students were formally recognised as such. In contrast, hospital-based programmes retained the status of secondary vocational education and participants were still considered pupils. The NNA framework, while comprehensive, remained advisory and it was not mandatory for hospitals to implement it.

Specialist theatre nursing had its philosophical grounding in NNA's Ethical Guidelines for Nurses and the International Council of Nurses' (ICN) Code of Ethics. The overarching goal was to prepare nurses to care for acutely- and critically-ill patients. The curriculum emphasised that societal needs should guide the structure and content of specialist education. Working in high-tech environments with vulnerable patient groups required evidence-based care supported by advanced theoretical knowledge and clinical experience. The programme was designed for registered nurses with at least two years of clinical practice.

To ensure high-quality care, the curriculum stressed reflective values, manual skills and the ability to critically assess the role of technology in patient care. Pupils[xlix]

were expected to demonstrate strong teamwork abilities, ethical awareness and a commitment to professional development. They were also encouraged to understand the historical and societal development of specialist nursing, engage with scientific theory and contribute to the advancement of their discipline. Leadership, clinical judgment and the integration of theory and practice were central components.

In clinical placements, pupils were expected to uphold the humanity and integrity of patients and their families, define and embrace their professional identity and ensure patient safety through ethical and evidence-based practice. They were also trained to take responsibility for leadership and collaboration within interdisciplinary teams.

The revised framework also reflected the academic elevation of nursing education in terms of its requirements for teaching staff. Leaders and instructors in hospital-based programmes were expected to be qualified theatre nurses with formal pedagogical training at the university college level. Supplementary subjects were to be taught by recognised subject-matter experts.[l]

The Norwegian Directorate of Health's educational curriculum (1982)

Although the national framework developed by NNA in 1989 marked a significant step towards standardisation, it was not the only attempt to formalise theatre nursing education during this period. Earlier, in 1982, the Norwegian Directorate of Health had proposed a separate curriculum, which ultimately was never implemented but reveals important contrasts in both content and professional involvement.

The 1982 curriculum was officially titled the Training Program for Healthcare Personnel in Operating Departments.[li] It was developed as a short-term measure to address the persistent shortage of theatre nurses. Although theatre nurses were considered essential for the efficient operation of surgical departments and the provision of adequate care to specialised patient groups, recruitment remained insufficient. The proposed solution involved analysing the division of labour within operating departments and delegating selected responsibilities from theatre nurses to auxiliary nurses.

The curriculum consisted of two parts: one for theatre nurses and one for auxiliary nurses. The working group included representatives from the Norwegian Association of Local and Regional Authorities, the

NNA, the auxiliary nurses' trade union, a professor of surgery from the Norwegian Surgical Association, and two educational directors from Oslo University Hospital (Rikshospitalet). Notably, no theatre nurses were included in the committee, and ONSF was not consulted during the development process.[lii]

The philosophical foundation of the curriculum emphasised a balance of nursing, medical and supplementary subjects.[liii] It aimed to highlight the importance of patient and family care, interdisciplinary teamwork, and the responsibility of educating patients, relatives, colleagues and other professionals. Despite the technical nature of theatre nursing, the curriculum stressed the central roles of holistic nursing and patient care.

The primary objectives were to enable theatre nurses to provide individualised and comprehensive care to surgical patients, manage both acute and elective procedures, prevent complications and ensure continuity of perioperative care through effective collaboration. Theatre nurses were also expected to apply principles of leadership and teaching in their practice. Practical training required pupils to gain experience in all major surgical specialities. They were expected to apply theoretical knowledge in clinical settings, develop skills in observation, evaluation, and intervention, and work proactively to prevent complications.

Regarding teaching staff, theoretical subjects were to be taught by subject teachers, while supplementary topics could be covered by adjunct instructors. A subject teacher was required to be a registered nurse with specialised training in theatre nursing and pedagogical education and to have at least two years of clinical experience. Practical training had to be supervised by a qualified theatre nurse.

The training of auxiliary nurses for work in hospitals' general surgical and medical wards had existed in Norway since 1963, introduced in response to the general nursing shortage.[liv] The 1982 programme followed the same logic of task redistribution, but this time it was specifically designed to support theatre nurses in the operating department. Unlike earlier proposals advocating for operating room technicians without nursing backgrounds,[lv] this programme did not aim to replace theatre nurses.[lvi] Instead, auxiliary nurses were trained for logistical tasks and to maintain and sterilise instruments. They were intended to support theatre nurses in the operating department, not to participate directly in surgical procedures. The programme lasted nineteen weeks, compared to seventy-four weeks for the theatre nurse curriculum.[lvii]

Although never implemented, the proposal exposed a potential risk of role dilution, showing how task redistribution, reflected in the stark contrast between the nineteen-week auxiliary programme and the seventy-four-week theatre nurse curriculum, could have undermined the professional identity and autonomy of theatre nursing.

Transition from hospital-based to university college education in theatre nursing (1999)

While nursing schools in Norway had been elevated from vocational institutions to university colleges by 1986, further education of specialised nurses remained an internal hospital-based programme.[lviii] The Ministry of Education and Research was responsible for education, but hospital programmes were governed by the Ministry of Labour and Social Inclusion. As a result, educational curricula developed by the NNA and the theatre nurses' interest group could not be formally approved by the Ministry of Education and Research.[lix]

These internal programmes were funded by the hospitals themselves, and the number of pupils admitted depended on local budgets. The curricula developed by NNA and ONSF were advisory and adherence was voluntary. It was not uncommon to see advertisements stating that a programme was 'based on the educational curriculum' or 'subject to county approval'.[lx] This uncertainty undermined recruitment, as registered nurses could not be sure whether a programme would run in a given year.[lxi] In the absence of a mandatory curriculum, it was difficult to establish uniform national education.

To address these challenges, the internal, hospital-based education of specialised nurses was approved for transfer to the university college system, a process that began in 1999 and was completed by 2001.[lxii] The transition was not abrupt. The NNA and its affiliated interest groups had begun working towards this goal in 1979, as reflected in the 1989 framework plan. While the 1975 curriculum developed by theatre nurses was detailed and practice-oriented, the 1989 plan introduced a structure more aligned with university college education. The elevation of nursing schools in 1986 also raised the qualification requirements for instructors from teacher to lecturer.[lxiii] The same standard was applied to specialised nursing education, as reflected in the 1989 framework.[lxiv]

The first national framework plan with regulations was introduced in 1999. It served as a governance tool to ensure uniformity, while allowing flexibility for local adaptation.[lxv] Admission to the programme required that applicants be registered nurses with at least two years of relevant clinical experience.

Although theatre nurses did not receive a separate authorisation, only those who completed and passed the sixteen-month programme could be referred to as theatre nurses.[lxvi]

The philosophical foundation of the programme emphasised theatre nursing as a specialised discipline within nursing that requires knowledge of acute and critical illness, surgical procedures and perioperative care. Theatre nurses were described as key members of the surgical team, responsible for preventing complications and ensuring patient safety through the application of nursing science, medical knowledge and technical skills. The curriculum highlighted the need for analytical and critical thinking, particularly in light of evolving technologies, resistant bacteria and the risks of blood-borne infection.[lxvii]

The primary objectives of the programme were to educate theatre nurses to be capable of delivering safe, evidence-based care in accordance with health legislation, professional values and scientific knowledge.[lxviii]Upon completion, students were expected to:

- provide care with respect for the integrity, resources, and experiences of patients and their families;
- prevent complications and infections and ensure the hygiene and safety of patients, staff and equipment;
- demonstrate ethical and legal judgment and collaborate effectively within the surgical team;
- teach patients, relatives, students and colleagues and reflect on their own and others' emotional responses;
- use and maintain instruments and medical–technical equipment, with a critical understanding of technology's possibilities and limitations; and
- document, evaluate and ensure quality in their practice and contribute to the development of the field.[lxix]

The goal of practical studies was to develop action competence and establish a foundation for responsible theatre nursing practice.[lxx] University colleges were legally required to ensure that all teaching was based at the forefront of research and experiential knowledge.[lxxi] Accordingly, theoretical instruction had to be delivered by personnel with formal and real competence, while practical training was to be supervised by instructors with pedagogical qualifications and up-to-date clinical experience in the surgical field.[lxxii]

This transitional period was significant because it resolved long-standing challenges of inconsistency and uncertainty by establishing a national framework that ensured uniform standards, strengthened

academic legitimacy and marked the full integration of theatre nursing into higher education.

Alignment with the Bologna Process: The second national framework plan with regulation (2005)

Only a few years after the introduction of the first National Framework Plan with Regulation in 1999, it became necessary to implement a new one. This was prompted by Norway's participation in the Bologna Process and the signing of the 1999 declaration on higher education among the participating European countries. The rationale behind the declaration was to establish a common degree structure that would enhance comparability and transparency in higher education, improve quality and increase mobility for students and researchers. As a result, the degree structure in Norway was redefined to align with the Bachelor – Master – Doctor (PhD) structure employed elsewhere.[lxxiii] At this stage, further education in theatre nursing was not incorporated into the degree system.

The philosophical foundation of theatre nursing was more clearly articulated in the new framework. Theatre nursing is a specialisation within the nursing profession, requiring both comprehensive knowledge of acutely- and critically-ill surgical patients and in-depth understanding of surgical techniques and treatments. A theatre nurse is responsible for organising and coordinating perioperative nursing care by observing, assessing and interpreting the patient's condition and taking appropriate action. The patient must be protected from harm, and the theatre nurse must possess precise knowledge of anatomy, medicine and antiseptic and aseptic techniques to prevent the occurrence of infections or complications during surgery.

Although the new framework plan did not introduce substantial changes to the programme itself, the regulation was adjusted to align with the Bologna Process. Previously, the scope of courses was measured in Norwegian credits, but these were now converted into European Credit Transfer System (ECTS) credits.[lxxiv]

Before the Bologna Process,[lxxv] the Norwegian higher education system required four years of study for an undergraduate degree[lxxvi] and six years for a graduate degree with a main subject.[lxxvii] For a transitional period, theatre nurses could apply for an undergraduate degree based on three years of nursing education and one and a half years of theatre nursing, thereby meeting the required breadth and depth to pursue graduate studies in nursing. With the Bologna alignment, the three-year nursing education was elevated to a bachelor's degree, which in turn qualified graduates for admission to master's and PhD programmes.[lxxviii]However, theatre nursing remained a form of further education without an academic degree and therefore did not provide eligibility for master's programmes,[lxxix] and

as a non-degree qualification nor did it meet the requirements for lecturer positions for teaching in university college programmes in theatre nursing.[lxxx] This potentially posed a challenge for recruiting academic staff for theatre nursing education at university colleges and enabling theatre nurses to engage in faculty development within hospitals.

In parallel with the Bologna Process, the European Qualifications Framework (EQF) was introduced as an EU initiative, with Norway participating as a member of the European Economic Area. The focus shifted from describing teaching content to articulating learning outcomes – what a student is expected to know, understand and be able to do upon completion of a course or programme. These outcomes were to be formulated in ascending order according to education level.[lxxxi] Efforts to develop and implement the Norwegian Qualifications Framework (NQF) in higher education began in 2003. The aim was to establish clear criteria for describing levels of learning and thereby provide both employers and employees with transparent competence goals. While learning outcomes were already in use in primary and secondary education in Norway, they were a new concept in higher education. With the NQF, it became possible to outline a coherent path for lifelong learning. The deadline for universities and university colleges to implement learning outcomes was set for 2012, while tertiary vocational colleges were given until 2014.[lxxxii]

A master's degree for theatre nurses and a national regulation of education for theatre nurses (2021)

A Norwegian Official Report from 1997 claims that specialised nurses educated internally within hospitals, such as theatre nurses, had developed a strong professional identity and considered themselves professionals in their own right and not merely as assistants to physicians.[lxxxiii] The same report further asserts that the hospital departments responsible for educating specialised nurses, including theatre nurses, seldom played a part in the hospital's overall educational responsibilities for other professions and physicians.[lxxxiv] It is reasonable to infer that if specialised nurses had developed a strong professional identity, it likely originated from themselves and their representative body, ONSF.

By 2012, universities and university colleges established learning outcomes for theatre nurses at level seven of the NQF, corresponding to a master's degree. These learning outcomes were anchored in the framework plan with regulations from 2005. While the local educational curricula were formulated according to new principles for describing documented competence, the framework plan and

regulations were overarching and intended for further education and not specifically for a master's degree.[lxxxv]

To create a more dynamic and future-oriented educational structure, the National Regulations for Norwegian Health and Welfare Education (RETHOS) were introduced. These regulations aimed to ensure adaptability to demographic changes, technological advancements and evolving treatment methods, while also allowing employers to influence educational content. RETHOS established national curricula based on the NQF and the European Qualifications Framework (EQF) for lifelong learning. Each programme was assigned a dedicated group comprising representatives from hospitals, educational institutions and students. Theatre nursing obtained a national curriculum in 2021, with implementation required by 2023.[lxxxvi]

The new regulation, implementation of which became mandatory in 2023, defines learning outcomes in medium level of detail, allowing for local adaptation by universities and university colleges.[lxxxvii] These outcomes are to be revised every four years.[lxxxviii] While a full list of learning outcomes is not provided here, the regulation emphasises the purpose and justification of the discipline, stating that theatre nursing should be practised in accordance with its knowledge base, values, culture and history.[lxxxix]

The programme is structured as a master's degree requiring 120 ECTS credits and building on a bachelor's degree in nursing. Graduates are qualified to work as theatre nurses and to engage in research and faculty development. Students who complete ninety ECTS credits are also qualified to work as theatre nurses but receive a transcript of records instead of a degree certificate and are not considered to have completed an academic degree. The distinction between the two rests in the competence to contribute to research and academic development, while the core clinical competencies remain the same.

Theatre nurses are expected to provide both basic and complex care, make clinical judgments and function in both sterile and circulating roles. They must demonstrate advanced skills in aseptic techniques and uphold patients' rights, including their participation in decision-making and the preservation of their dignity. The regulation also introduces new elements, such as sustainability, innovation and cultural sensitivity. In particular, it acknowledges the rights of the indigenous Sami people to culturally appropriate healthcare, including language considerations.[xc] These values are consistent with the ICN Code of Ethics and its Norwegian counterpart but are now explicitly embedded in national regulations.[xci]

This shift to a master's level programme marked a decisive step in elevating theatre nursing to an advanced academic discipline, aligning it with the structural ambitions of the Bologna Process and reinforcing its status as a research-informed profession within higher education.

Conclusion

By tracing the development of national curricula and the role of professional actors such as the ONSF and the NNA, this study demonstrates how theatre nurses have actively contributed to the production of professional knowledge and the legitimisation of their field. The analysis of original documents and the interpretive synthesis offer new insights into the professional identity and epistemological foundations of theatre nursing. This article not only synthesises existing knowledge but also generates new perspectives on the interplay between educational reforms and professional development.

Theatre nursing in Norway is formally defined as encompassing the two interdependent roles of circulating nurse and scrub nurse. To qualify as a theatre nurse, both roles must be mastered. While the circulating role has traditionally been associated with care giving and the scrub role with technical precision, theatre nurses have long understood these functions as inseparable in clinical reality. This duality was formally acknowledged in the RETHOS regulation, which affirms that both technical and care-giving competencies are essential to theatre nursing.

The professionalisation of theatre nursing has followed a clear trajectory: from apprenticeship-based training prior to 1975 to internal hospital education from 1975 onwards and finally to university-level programmes between 1999 and 2001. The introduction of a unified national curriculum in 1999 marked a turning point, aligning the education of theatre nurses with broader academic standards. The subsequent elevation to the master's level represents not merely a structural reform but a necessary development to ensure evidence-based practice, patient safety and compliance with legal and ethical standards in an increasingly complex healthcare environment.

In Norway, the transformation from a unified national curriculum in 1999 to a fully regulated master's degree in 2024 occurred in just twenty-five years. This rapid progression reflects not only the evolving complexity of healthcare but also the growing recognition that theatre nursing must be grounded in evidence-based practice. As surgical procedures, technologies and patient expectations have advanced, so too has the need for theatre nurses to critically assess clinical evidence, apply research findings and contribute to the development of safe, effective and ethically sound care. The academic

elevation of the profession has therefore been essential, not only for professional legitimacy but also to ensure that theatre nursing meets the highest standards of patient safety and clinical excellence.

Although the option of completing the programme with ninety ECTS credits, without receiving a degree, reflects a certain political ambivalence around the endorsement of theatre nursing as a professional specialism, the RETHOS regulation nonetheless represents a significant step forward. It embodies the structural ambitions of the Bologna Process and the Norwegian Qualifications Framework, while also realising the long-standing professional vision articulated by ONSF and the NNA. The regulation's emphasis on dual-role competence, ethical foundations and the integration of research and faculty development reflects decades of advocacy and professional development.

In this light, the RETHOS regulation constitutes not a rupture with the past but the culmination of a long-standing professional evolution anchored in a framework that ensures both academic legitimacy and clinical relevance. Future research should explore the impact of master's level education on clinical practice and professional identity and thus further contribute to the knowledge base of theatre nursing. Additionally, research might usefully explore how the implementation of the master's degree affects clinical outcomes, professional identity and interdisciplinary collaboration, as well as how theatre nurses themselves experience the transition from vocational to academic education.

Endnotes

i Sofus Widerøe, 'Kirurgisk sykepleie' [Surgical nursing], in K. Grøn and S. Widerøe, *Lærebok i sykepleien* [Textbook in nursing], 2nd edn (Oslo: H. Aschehoug & Co. (W. Nygaard), 1926), pp. 101–76.

Rikke Nissen, *Lærebog i sygepleie* [Textbook in nursing] (Oslo: Gyldendal Akademisk, 2000 [1877]). This work, reissued with commentary by Kari Martinsen, highlights the early integration of technical and moral responsibilities in Norwegian nursing

ii Kristin Asdal and Hilde Reinertsen, *Hvordan gjøre en dokumentanalyse: En praksisorientert metode* [How to do a document analysis: A practice-oriented method] (Oslo: Cappelen Damm Akademisk, 2024).

[iii] Norsk Sykepleierforbund – Landsgruppe av operasjonssykepleiere [ONSF], *Forslag til revidert utdanningsplan for operasjonssykepleiere* [Proposal for a revised educational plan for theatre nurses] (Oslo: Norsk Sykepleierforbund, 1977).

Originally adopted by ONSF in 1975 and nationally approved by the Norwegian Nurses Organisation (NNA) in 1976 and published in 1977; hence referred to as the 1975 Proposal for a revised educational plan.

[iv] Norsk Sykepleierforbund, *Videreutdanning i anestesi-, intensiv-, operasjons- og røntgensykepleie* [Further education in anesthesia, intensive care, theatre and X-ray nursing] (Oslo: Norsk Sykepleierforbund, 1989).

[v] Norwegian Directorate of Health*, Opplæringsprogram for sykepleiepersonell i operasjonsavdelinger* [Training programme for healthcare personnel in operating departments] (Oslo: Norwegian Directorate of Health, 1982).

[vi] Ministry of Education and Research, *Videreutdanning i anestesi-, operasjon, intensiv, barne- og kreftsykepleie. Rammeplan og forskrift* [Further education in anaesthesia, theatre, intensive care, paediatric and oncology nursing. Framework plan and regulation] (Oslo: Ministry of Education and Research, 1999).

[vii] Ministry of Education and Research, *Rammeplan for videreutdanning i operasjonssykepleie. Rammeplan og forskrift* [Framework plan for further education in theatre nursing. Framework plan and regulation] (Oslo: Ministry of Education and Research, 2005).

[viii] Ministry of Education and Research, *Forskrift om nasjonal retningslinje for operasjonssykepleierutdanning* [Regulation on national guidelines for theatre nursing education], 28 October 2021 <https://lovdata.no/dokument/LTI/forskrift/2021-10-26-3095> [accessed 13 June 2025].

ix Hans-Georg Gadamer (trans Joel Weinsheimer and Donald G. Marshall), *Truth and Method*, 2nd edn (London: Sheed and Ward, 1979), pp. 245–53.

x Stephanie J. Snow, *Blessed Days of Anaesthesia* (Oxford: Oxford University Press, 2008).

xi Lindsey Fitzharris, *The Butchering Art* (London: Allen Lane, 2017).

xii Kjell E. Strømskag, *Et fag på søyler. Anestesiens historie i Norge* [A profession on pillars: The history of anaesthesia in Norway] (Oslo: Tano Aschehoug, 1999).

xiii Julius Nicolaysen, 'Om anvendelsen af nogle antiseptica i nyere kirurgi' [On the use of some antiseptics in modern surgery], Christiania [Oslo]: Norsk Magazin for Lægevidenskaben, 22 (1868).

xiv Nissen, *Lærebog i sygepleie.*

xv Jan-Thore Lockertsen, *Operasjonssykepleie ved Troms og Tromsø sykehus 1895-1974* [Theatre nursing at Troms and Tromsø Hospital 1895–1974] (Tromsø: Master's thesis, UIT – Norwegian Arctic University, 2009).

xvi Marie Joys*, Erindringer* [Memories] (Oslo: Cammermeyers Boghandel, 1947).

Strømskag, *Et fag på søyler.*

xvii Margarete Sandelowski, *Devices & Desires: Gender, Technology and American Nursing* (Chapel Hill: University of North Carolina Press, 2000).

xviii Nils Backer-Grøndahl*, Narkose og pleie av operationspatienter* [Anaesthesia and nursing of surgical patients], 2nd edn (Oslo: Røde Kors' Kristiania Kreds, Sykepleierskolen, 1926).

[xix] Maren Marthinsen and Johan Haffner, ‘Pleie ved kirurgiske sykdommer’ [Nursing of surgical patients], in Anton Jervell (ed.), *Lærebok for sykepleiersker*, Bind 1 [Textbook for nurses, vol. 1] (Oslo: Fabritius & Sønners Forlag, 1941), pp. 225–42

[xx] Marie Lysnes, *Sykepleierutdanningens historie i Tromsø 1879-1940* [The history of nursing education in Tromsø 1879-1940] (Unpublished manuscript, Tromsø: UIT – Norwegian Arctic University, 1988).

[xxi] Elisabeth Ordrop, ‘Hva ligger i uttrykket spesialutdannet sykepleier’ [What does the term specially trained nurse mean? Note from the Directorate of Health], Sykepleien, 41.13 (1953), p. 390.

[xxii] Jorunn Mathisen, Sykepleiehistorie. – ideer – mennesker – muligheter [Nursing history. – Ideas – humans – possibilities], 2nd edn (Oslo: Gyldendal Akademisk, 2018)

[xxiii] Strømskag, *Et fag på søyler.*

[xxiv] Ingeborg Pløen, ‘Spesialutdanning i operasjons- og narkosesykepleie i grunnskolen og senere’ [Specialised training in theatre and anaesthesia nursing in nursing school and later], Sykepleien, 42.19 (1954), 587–89 .

[xxv] Bjørn Lind, personal communication, 2015.

[xxvi] Strømskag, *Et fag på søyler.*

[xxvii] Åshild Fause, ‘Tiltak for å motvirke sykepleiermangelen’ [Measures to counteract the nursing shortage], in Åshild Fause and Anne Micaelsen (eds), *Et fag i kamp for livet. Sykepleiens historie i Norge* [A profession fighting for lives: The history of nursing in Norway] (Bergen: Fagbokforlaget, 2002), pp. 237–51.

[xxviii] Deborah L. Hallquist, ‘Developments in the RN first assistant role during the Korean War’, AORN Journal, 82.4 (2005), 644–47.

Joanna Kotcher Fuller, *Surgical Technology: Principles and Practice*, 6th edn (St. Louis: Elsevier, 2013).

xxix Jon A. Johnson and Astrid Saltnessand, 'From Professor Jon Anton Johnson, MD, PhD, and Head Nurse Astrid Saltnessand to The University of Tromsø. About establishing of a school for operating room technicians', Archive 333 87 Tromsø: UIT – The Norwegian Arctic University, 17 August 1973.

xxx Mathisen, Sykepleiehistorie.

xxxi Ingeborg Pløen, 'Utdannelse av operasjonssøstre' [Education of theatre nurses], Sykepleien, 37 (1950), 289–94.

xxxii Borghild Hillestad, 'Kåseri om arbeid ved amerikanske sykehus' [Causerie about work at American hospitals], Sykepleien, 37.4 (1949), 78.

xxxiii Borghild Hillestad, *Operasjonsstueteknikk* [Operating Theatre Technic] (Oslo: Fabritius & Sønners Forlag, 1956).

xxxiv Edyth Alexander, *Operating Room Technique* (St. Louis: Mosby, 1944).

xxxv Alexander's textbook was adapted for use in several countries. In Norway, it played a central role in shaping the practical training of theatre nurses and are in use pr 2025.

xxxvi Mette Høiland, *Operasjonssykepleie i over 40 år* [Theatre nursing over more than 40 years] (Operasjonssykepleierne NSF, 1996). p 55.

xxxvii Jon A. Johnson and Astrid Saltnessand, 'From Professor Jon Anton Johnson, MD, PhD, and Head Nurse Astrid Saltnessand to The University of Tromsø. About establishing of a school for operating room technicians', Archive 333 87 Tromsø: UIT – The Norwegian Arctic University, 17 August 1973.

[xxxviii] Lockertsen, *Operasjonssykepleie.*

[xxxix] Anne Simonsen, ‘Sykepleiermangelen’ [Nursing shortage], Nordlys, 8 January 1975, 4, 12.

[xl] Sylvia Gjendem, ‘To Director of Education Anne Simonsen, Tromsø Hospital’ [Unpublished manuscript], Local Archive of Norsk Sykepleierforbund – Landsgruppe av operasjonssykepleiere [ONSF], Tromsø, 6 January 1975.

[xli] The names of the committee members are not listed in the published curriculum, but archival correspondence from ONSF confirms their professional backgrounds and affiliations.

[xlii] In the Norwegian context of the 1970s, this referred to vocational education offered within hospitals, not part of the formal higher education system governed by the Ministry of Education.

[xliii] These values were explicitly stated in the curriculum’s introduction and reflected broader ideals in Norwegian nursing education at the time, influenced by Florence Nightingale’s legacy and Red Cross principles.

[xliv] These values were explicitly stated in the curriculum’s introduction and reflected broader ideals in Norwegian nursing education at the time, influenced by Florence Nightingale’s legacy and Red Cross principles.

[xlv] This included the use of modern anesthesia machines, electrosurgical units, sterilization equipment, and early forms of patient monitoring systems.

[xlvi] These roles were formally defined in the curriculum and reflected the division of labour in Norwegian operating theatres, where the sterile nurse worked directly in the surgical field, while the coordinating nurse managed logistics, safety, and communication.

xlvii Norsk Sykepleierforbund – Landsgruppe av operasjonssykepleiere [ONSF], *Forslag til revidert utdanningsplan for operasjonssykepleiere* [Proposal for a revised educational plan for theatre nurses] (Oslo: Norsk Sykepleierforbund, 1977).

xlviii Norsk Sykepleierforbund, *Videreutdanning i anestesi-, intensiv-, operasjons- og røntgensykepleie* [Further education in anesthesia, intensive care, theatre and X-ray nursing] (Oslo: Norsk Sykepleierforbund, 1989).

xlix The term pupil is used throughout this article to refer to individuals in apprenticeship-based training prior to the integration of theatre nursing into the university system in 1999. The term student is reserved for those enrolled in higher education programs.

l Norsk Sykepleierforbund, *Videreutdanning i anestesi-, intensiv-, operasjons- og røntgensykepleie* [Further education in anesthesia, intensive care, theatre and X-ray nursing] (Oslo: Norsk Sykepleierforbund, 1989).

li Norwegian Directorate of Health*, Opplæringsprogram for sykepleiepersonell i operasjonsavdelinger* [Training programme for healthcare personnel in operating departments] (Oslo: Norwegian Directorate of Health, 1982).

lii Norsk sykepleierforbund (NNA), 1989, p. 30.

liii The absence of theatre nurses in the working group was noted in the preface to the curriculum (1982, pp- 3-4) and later criticized by ONSF in internal correspondence (unpublished).

The curriculum outlined a tripartite structure, with equal emphasis on nursing theory, medical knowledge, and interdisciplinary collaboration (1982, p. 6).

liv Fause, ‘Tiltak for å motvirke sykepleiermangelen’.

lv Johnson and Saltnessand, Letter.

[lvi] This distinction was important in the context of earlier debates, particularly the 1973 proposal by Johnson and Saltnessand advocating for operating room technicians without nursing backgrounds.

[lvii] The significant difference in program length reflected the auxiliary nurses' limited scope of practice, which was restricted to logistical and technical support roles (1982, pp. 16–27).

[lviii] Mathisen, *Sykepleiehistorie*. p. 180.

[lix] Høiland, *Operasjonssykepleie i over 40 år.* p.76.

[lx] Buskerud sentralsykehus, 'Buskerud fylkes spesialutdanning i anestesi-, intensiv-, og operasjonssykepleie' [Buskerud County further education in anesthesia, intensive care, and theatre nursing], Sykepleien, 73.13 (1985), 31.

[lxi] Høiland, *Operasjonssykepleie i over 40 år.* pp. 72-3.

[lxii] Norwegian Parliament, Norwegian Parliament decision, 19 June 1998 <https://www.stortinget.no/no/Saker-og-publikasjoner/Stortingsforhandlinger/Lesevisning/?p=1997-98&paid=7&wid=a&psid=DIVL14&pgid=d_0869> [accessed 13 June 2025].

[lxiii] Ellen C. Lund, Virke og profesjon. Norsk Sykepleierforbund gjennom 100 år (1912–2012) [Work and profession: The Norwegian Nurses Association through 100 years (1912–2012)] (Oslo: Akribe, 2012). pp. 355–56.

[lxiv] Norsk Sykepleierforbund, *Videreutdanning i anestesi-, intensiv-, operasjons- og røntgensykepleie* [Further education in anesthesia, intensive care, theatre and X-ray nursing] (Oslo: Norsk Sykepleierforbund, 1989).

[lxv] Ministry of Education and Research, *Videreutdanning i anestesi-, operasjon, intensiv, barne- og kreftsykepleie. Rammeplan og forskrift* [Further education in anaesthesia,

theatre, intensive care, paediatric and oncology nursing. Framework plan and regulation] (Oslo: Ministry of Education and Research, 1999).

Norsk sykepleierforbund, 1989, p. 30.

[lxvi] Ministry of Education and Research, 1999, p. 7.

[lxvii] Ibid. pp. 54–6.

[lxviii] Ibid. pp. 36–7.

[lxix] Ibid. p. 39.

[lxx] Ibid. pp. 39–40.

[lxxi] Ministry of Education and Research, Lov om universiteter og høgskoler [Law about university and university colleges], 1 January 1996, §2-1. <https://lovdata.no/dokument/NLO/lov/1995-05-12-22> [accessed 13 June 2025].

[lxxii] Ministry of Education and Research, *Videreutdanning i anestesi-, operasjon, intensiv, barne- og kreftsykepleie. Rammeplan og forskrift* [Further education in anaesthesia, theatre, intensive care, paediatric and oncology nursing. Framework plan and regulation] (Oslo: Ministry of Education and Research, 1999). p. 76.

[lxxiii] Ministry of Education and Research, Meld.St. nr 27 (2000-2001). Gjør din plikt – Krev din rett. Kvalitetsreform av høyere utdanning [Do your duty – claim your rights. The quality reform of higher education], 9 March 2001.

[lxxiv] Ministry of Education and Research, *Rammeplan for videreutdanning i operasjonssykepleie. Rammeplan og forskrift* [Framework plan for further education in theatre nursing. Framework plan and regulation] (Oslo: Ministry of Education and Research, 2005).

[lxxv] The Bologna Process is a European reform initiative launched in 1999 to create a European Higher Education Area (EHEA) by making academic degree standards and quality assurance standards more comparable and compatible across Europe.

[lxxvi] Candidatus Magisterii was the former Norwegian undergraduate academic degree requiring four years of study, roughly equivalent to a bachelor's degree with additional specialization. It was phased out with the implementation of the Bologna Process.

[lxxvii] Ministry of Education and Research, Forskrift om krav til bredde og fordypning for grader og yrkesutdanninger ved universiteter og høgskoler [Regulations for breadth and depth requirements for degrees and vocational education at universities and university colleges], 23 December 1999 <https://lovdata.no/dokument/SFO/forskrift/1999-12-23-1528> [accessed 13 June 2025].

[lxxviii] Lund, 'Work and profession'. p. 354.

[lxxix] Further education vs. academic degree: In the Norwegian context, "further education" (videreutdanning) refers to post-qualification training that does not result in an academic degree, whereas academic degrees (bachelor, master, Ph.D.) are part of the formal higher education system.

[lxxx] Ministry of Education and Research, Forskrift til rammeplan for videreutdanning i operasjonssykepleie [Regulations for framework plan for further education in theatre nursing], 12 December 2005. pp. 15-16.

<https://lovdata.no/dokument/SF/forskrift/2005-12-01-1385> [accessed 13 June 2025].

[lxxxi] Ministry of Education and Research, *Nasjonalt kvalifikasjonsrammeverk for livslang læring* (NKR) [Norwegian qualifications framework for lifelong learning] (Ministry of Education and Research, 2011).p. 8.

[lxxxii] Ibid. pp. 8–10.

[lxxxiii] Ministry of Labour and Social Inclusion, Pasienten først! Ledelse og organisering i sykehus [Patient first! Management and organisation in hospitals] (Ministry of Labour and Social Inclusion, 1997).

[lxxxiv] Ibid. p. 25.

[lxxxv] Ibid. pp. 37-38.

[lxxxvi] Ministry of Education and Research, *National curriculum regulations for Norwegian health and welfare education* (RETHOS), 16-17 September 2019 <https://www.regjeringen.no/en/topics/education/higher-education/nasjonale-retningslinjer-for-helse–og-sosialfagutdanningene-rethos/id2569499/> [accessed 13 June 2025].

[lxxxvii] At that time, no institutions were formally accredited to offer master's degrees in this field, as the university colleges lacked staff with the required academic qualifications (first-level competence) in accordance with the national regulations for master's programmes.

[lxxxviii] Norwegian Directorate of Higher Education and Skills, Mandat for RETHOS [Mandate for RETHOS], August 2024 <https://hkdir.no/hoyere-utdanning-og-forskning/nasjonale-retningslinjer-for-helse-og-sosialfagutdanningene-rethos/mandat-for-rethos> [accessed 13 June 2025].

[lxxxix] Ministry of Education and Research, *National curriculum regulations for Norwegian health and welfare education* (RETHOS), 16-17 September 2019 <https://www.regjeringen.no/en/topics/education/higher-education/nasjonale-retningslinjer-for-helse–og-sosialfagutdanningene-rethos/id2569499/> [accessed 13 June 2025]. § 27.

[xc] Ministry of Education and Research, *National curriculum regulations for Norwegian health and welfare education* (RETHOS), 16-17 September 2019 <https://www.regjeringen.no/en/topics/education/higher-education/nasjonale-retningslinjer-for-helse–og-sosialfagutdanningene-rethos/id2569499/> [accessed 13 June 2025]. p. § 2.

[xci] International Council of Nurses, *The ICN Code of Ethics for Nurses* (International Council of Nurses, 2021). ICN, 2021, § 1.3; Norsk Sykepleierforbund, 2023, § 1.3.