


PRACTICE DEVELOPMENT PAPER

Review of advanced nursing practice in Denmark with an exemplar

Susanne A. Quallich PhD, ANP-BC, NP-C, CUNP, FAANP¹  | Jane Grauengaard RN² | Dana A. Ohi MD¹ | Jens Sønksen MD, DMSc^{2,3}

¹Michigan Medicine Department of Urology, University of Michigan, Ann Arbor, Michigan

²Urological Department, Herlev Hospital, Herlev, Denmark

³University of Copenhagen, Copenhagen, Denmark

Correspondence

SA Quallich, Department of Urology, University of Michigan Health System, 3875 Taubman Center, 1500 E. Medical Center Drive, SPC 5330, Ann Arbor, MI 48109-5330. Email: quallich@umich.edu

Advances in independent nursing practice can expand the professional identity of nurses. Although there is no formal recognition for an advance practice nursing role in Denmark, there are clear examples of nursing expanding its scope to meet the meet of individual patients and larger community needs. Many Danish nurses work with expanded competencies in surgical settings, medical settings, psychiatric environments, and are instrumental in promoting continuity of care for patients who have chronic conditions. Expansion of the nursing role is an example of health care evolving to meet societal and patient needs, even within a controlled research environment, and will promote job satisfaction and retention among its most experienced nurses. This paper offers a review of expanded nursing roles in Denmark and offers further evidence of expanded autonomy for nurses in a clinical research environment.

KEYWORDS

advanced nurse practitioner, independent nursing practice, urology nursing, *Sygeplejersker*

1 | INTRODUCTION

The World Health Organization (WHO) acknowledges that nurses and midwives are the largest part of the European health care workforce and supports their goals to “work effectively, efficiently and to their full potential as independent and interdependent professionals” (p. 9).¹ The WHO states the primary public health challenge in Europe is care of people with chronic health conditions, and promotes expansion of the nursing scope of practice as a method to address this concern. The role of nursing in Denmark is “to provide total care for patients, and develop methods for assessing, reflecting, planning, conducting, evaluating and developing nursing, and assisting medical treatment”.² However, Denmark does not have a formal degree or professional certification recognizing an expanded scope of nursing practice.

2 | BACKGROUND

In 2008, the Danish Nurses Organization offered the following definition for “Advanced Nurse Practitioner” (ANP): “within a restricted area of diseases/conditions advanced nurse practitioners have authority to independently diagnose, order and interpret diagnostic and laboratory

examinations, prescribed drugs, initiate nursing care and medical treatment, referred to specialists and discharged patients.”³ Literally translated the Danish ANP is “clinical expert nurse”. The ideal ANP has several years of clinical experience, followed by academic continuing education for knowledge and clinical skills and expert level of practice.

Despite these descriptions, however, the actual role of the Danish ANP is unclear. The proposed role of the ANP is to improve consistency in the care of patients with chronic diseases, as a way to improve overall quality of care and patient satisfaction. Examples of this expanded nursing role in Denmark in the formal literature to date are sparse, and emphasize various domains of the proposed ANP role, rather than the role as an effective whole. Gustafsson et al⁴ reported on the results of a nurse-led heart failure clinic staffed by nurses after specialized education. Patients could be directly referred to this clinic from a general practitioner, cardiologist or internal medicine practice. Nurses managing this clinic independently adjusted diuretic medication doses according to protocols. Nursing intervention lead to measurable decreases in mortality, making this project successful, but it also significantly increased access to care for heart failure patients.

Patients after a total hip replacement demonstrated significant improvements in overall quality of life and general health status in a nurse-led postoperative telephone assessment and counselling program.⁵ In this program, nurses were empowered to assess patients

and recommend further support and counselling in regard to postoperative healing and overall health status. The domains assessed included symptoms such as leg swelling, pain, sleep disturbance, nausea, fluid intake status, issues with returning to normal dietary schedule and overall well-being. Nurses recommended traditional nursing interventions as needed, with overall improvements in physical function, mental health and general health when compared with controls.

A phenomenological report of ANPs in Denmark highlighted the results of expansion of their role into areas traditionally considered the domain of physicians, such as physical assessment. These changes resulted in a new clinical dimension to nursing practice that included autonomy, self-esteem and confidence in their day-to-day role, and a more demanding professional identity.⁶ The ANPs in the study improved their clinical knowledge base and sought information from professional journals relevant to their new role, suggesting their patient population will be positively impacted. The authors reported that the ANPs felt their approach to patient care was more holistic and humanistic than their physician counterparts, as they blended nursing care with medical management. This group of ANPs felt their expanded role promoted better continuity of care.

Rosted et al⁷ reported on a study of geriatric patients randomized to intervention following an emergency department geriatric case management model. Patients (>70 years) considered at high risk for functional decline and readmission to either the emergency department or an inpatient unit were evaluated by nursing specialists with additional education in geriatrics and gerontology. These nurses assessed medical, social, emotional and physical domains that could remain unresolved and require additional medical intervention. Nurses intervened based on the initial patient assessment that including options such as teaching, referral for additional care in a geriatric outpatient clinic, initiating contact with the individual's general practitioner (GP) and making additional care arrangements with the local community health centre. Although nurses could not formally "prescribe" community services or a return to the GP, nurses did have authority to directly refer patients to both fall prevention clinics and geriatric outpatient clinics. The greatest impact of this program was having nurses act as care coordinators after identifying specific social and functional needs for patients.

Success of an ANP role with a telemedicine program for patients with diabetes has been reported.⁸ This retrospective review of diabetic patients on the island of Aeroe involved men and women managed by a nurse specialist, with access to a physician when needed via telemedicine consultation. In this rural area of Denmark, patients were managed by a nurse specialist able to identify potentially unresolved diabetic management issues, at significant cost saving to patients, their employers and the Danish Health Service. Patients maintained equal control of HgbA1c as when they had travelled to see a physician face-to-face.

A more recent report from Jakobsen et al⁹ discussed the role of nurses in establishing a fast-track colon surgery clinic. Postoperative nurses were stakeholders in the development of a program for patient information, surgical teaching, pain management, fluid management, early mobilization and rapid return to normal diet. Their expanded practice was supported by clinical practice guidelines, indicating nurses could make changes to patients' daily care without direct input

WHAT IS KNOWN ABOUT THIS TOPIC

- Although there may not be a true "shortage" of nurses in Denmark, the concept of a nursing shortage may represent a failure of the healthcare system to enable nurses to work to the full extent of their training and license.

WHAT THIS PAPER ADDS

- Expansion of the role of nursing is consistent with Denmark's national goals to shift care from inpatient to outpatient settings and promotes accountability for its nursing science. This paper offers evidence that this role expansion is in progress, and can be successful. Evolution and expansion of the nursing role in Denmark (*Sygeplejersker*) may provide an opportunity to improve access for various disease management and research needs, while elevating the professional status of nurses within Danish society.

from physicians. Nurses on this unit prepared for this role by attending seminars to improve their competency and skill level, and the overall unit was organized as part of a multidisciplinary group. Jakobsen et al⁹ reported a high positive impact on the quality of surgical nursing care because nurses had been involved in expansion of their role as the unit was conceptualized. The unit demonstrated measurable improvements in postoperative pain management and inpatient hospital days decreased, representing significant cost savings for the facility.

Østergaard and Wagner¹⁰ discussed the emerging role of the Danish family nurse, a role in which a generalist nurse assesses the individual within the context of the family. This expanded nursing role promotes both theoretical knowledge and the role for local, community-level intervention for nurses, as they work to care for both an individual and his/her family. The gradual development of this particular role highlights the need for health care that is family focused; neither general practitioners nor hospital systems promote a systematic model for care of the family in Denmark. The emergence of this role also underscores the manner in which nursing professionals can move into areas that have traditionally been underserved.

3 | EXEMPLAR OF ADVANCED NURSING PRACTICE

The research unit for the Department of Urology at Herlev Hospital in Copenhagen Denmark is primarily staffed by nurses. This unit was originally developed in 2008 by Dr. Jens Sønksen to promote the *independent* practice of nurses as they worked to coordinate research projects for urology patients, under his supervision. In order to make the distinction between routine clinical care and the advanced care

TABLE 1 Summary of selected research projects from Urological Department Herlev Hospital

- Metabolic changes due to iatrogenic hypogonadism in patients with prostate cancer.
- Supervised group based exercise for men with prostate cancer on androgen deprivation therapy.
- MRI and prostate cancer.
- Neglected sexual side-effects after radical prostatectomy.
- Transcutaneous mechanical nerve stimulation post-prostatectomy.
- Electrochemotherapy in bladder cancer.
- Sexual function in patients with urothelial cancer.
- Perioperative care after radical cystectomy for bladder cancer.
- Percutaneous testicular sperm aspiration as first line treatment in non-obstructive azoospermia.
- Optimizing human semen cryopreservation by reducing test vial volume and repetitive test vial sampling.

Future projects: Androgen blockade and chemotherapy with castration resistant prostate cancer; mitigating adverse effects of androgen deprivation therapy; preservation of erectile function in men with radical prostatectomy by pudendal nerve stimulation, postoperative pain management: comparison between Herlev Hospital and Michigan Medicine urology patients; evaluation of nerve impulses during robotic prostatectomy to locate nerves pre & postoperatively

provided in a research unit, it is housed in a separate location from the main hospital urology department. This unit is currently staffed by 15 total employees that include nursing staff and resident physicians. Three research nurses and one laboratory technician are responsible for primary maintenance of clinical studies with the study's primary investigators. The support for these multiple ongoing studies is driven by the nursing staff.

The initial focus of this unit was to increase the scientific work done through the Department of Urology. This included developing and qualifying patient treatments performed, by creating an interface between the scientific work and the daily clinical work of the urology department staff. The unit is intended to produce both medical and nursing research of a high national and international quality, and contributes to the development of urology as a specialty, and the care of urologic patients. The urological research unit is designed to create and foster a research environment for both established researchers and novice researchers, physicians or nurses, who wish to participate in research projects that focus on urology care (Table 1). A secondary goal of this unit is to expand and facilitate cooperation with both national and international institutions and industry. This unit demonstrates a progressive vision that strives to improve patient care with more autonomy and expertise for its urology nursing staff. An expanded nursing role provides nurses with greater skills and independence, and promotes care delivery in an interprofessional environment.

3.1 | Nursing patient management

After patients are referred for participation in one of the numerous research studies, it becomes the responsibility of the research unit nurses to effectively screen patients to ensure they meet study inclusion criteria. The nursing staff of the Urological Research Unit are responsible not only for maintaining individual study protocols, but for developing relationships with study patients that includes assessment and maintenance of both their urologic conditions and recognition of changes in their general medical comorbidities as needed. The nurses

of this unit demonstrate advanced assessment skills, and frequently act as clinical instructors to the resident physicians as the residents begin to learn the finesse points of the urologic clinical exam. Although the nursing staff may not have the ability to adjust urologic medications, their primary role beyond the constraints of any research study is to monitor the urologic health of the participants in their studies. This also requires the research unit nurses to act as care coordinators for these patients, and contact either of the primary investigator urologist or the individual's primary physician is needed for changes in their condition.

This unit has created an environment where the research clinical nurses have developed exceptional physical examination skills as well as advanced assessment skills, in order to recognize changes in patient's overall medical conditions. This is especially vital for patients participating in urologic oncology research, as their conditions can frequently change from week to week.

4 | DISCUSSION

There is no regulation in Denmark for advanced nursing practice.¹¹ Reforms in Denmark changed nursing education from an apprenticeship model to one requiring a university-based system; in 1990 Denmark established the bachelor's degree as entry-level for nursing, called *Sygeplejerske* (certified nurse). Objectives for nursing education specifically aim to "qualify nurses to act autonomously and to participate in interdisciplinary cooperation regarding patient care".¹² This can clearly extend into the interdisciplinary realm of clinical research. Nurses can seek an additional diploma examination from the Danish Medical Association as a Clinical Research Nurse, which focuses on organization of sponsor-initiated trials. There are also additional resource courses for health care providers (including nurses) that emphasize conduct for initiating and participating in research on a daily basis. Nurses also have an option to pursue a Masters degree program through Aarhus University where they can focus on research science.

The nursing staff of the Urological Research Unit, Herlev Hospital meet the criteria established by the Danish Nurses Organization for the role of "Advanced Nurse Practitioner". They demonstrate proficiency in three distinct domains: patient care, professionalism, and their role within the health system itself. Their advanced role emphasizes the value of the nursing role in health care and society, and opens the door for increased nursing participation in hospital management and increases nurses' ability to influence decision making.

The nursing staff of the Urological Research Unit demonstrate skills and knowledge that are consistent with Benner's theory¹³ for progression of nurses from novice to expert, and are also consistent with recent competencies for advanced nursing professionals working with adult urology patients.¹⁴ This consistency reinforces that nurses who are part of this unit are working at an advanced level as intended by the DNO ANP definition. Despite the fact that the unit is primarily a research unit, the nursing staff is providing care within a research context that demonstrates a thorough understanding of genitourinary pathophysiology and the ability to preserve the nursing role in effective research patient management.

5 | CONCLUSIONS

Many Danish nurses work with expanded competencies in surgical settings, medical settings and psychiatric environments. In rural areas of Denmark, nurses have begun to assume more independent roles, especially in the absence of local specialty providers.⁸ Expansion of the role of the nurse within a urology research environment offers an exemplar for meeting the increasing demand for urology services and a way to offset the decline in available urologists. It allows expert clinical staff to address specific needs within a research population while promoting interdisciplinary collaboration, and could easily be expanded into specific care needs¹⁵ for a general urology population. For example, there are reports of nurse-led cystoscopy clinics in rural areas of Denmark, to allow the local population to meet the national surveillance screening standards for bladder cancer; this represents an expansion of nursing practice driven by local patient need.

Nursing in Denmark remains less than it can be and less than it should be. Expansion of the current nursing role, or formally recognizing the ANP role, is consistent with recommendations from the World Health Organization and the Organization for Economic Co-operation and Development¹⁶ to increase utilization of advanced clinical nurses in health care. The benefit to Danish nurses on the global stage is to modernize the role of nursing in Denmark, consistent with that seen in other countries.^{11,17} It is a reflection of the expert knowledge base, scope of practice and interdisciplinary nature of the emerging model for health care delivery.

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Conflict of interest

The authors declare no conflict of interest.

ORCID

Susanne A. Quallich  <http://orcid.org/0000-0002-6522-4035>

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