

EDITORIAL

Task substitution in the ICU

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Every year, approximately 65,000 to 75,000 patients are admitted to intensive care units (ICUs) in the Netherlands.^[1] These patients have complex care needs and often comorbidities which require intensive care management. Given the increasing number of patients with complex life-threatening diseases and the ageing population, ICUs continue to expand.^[2] To guarantee continuity and quality of care, adequate staffing of ICUs is indispensable. However, adequate staffing in ICUs is an increasing problem worldwide as well as in the Netherlands. To resolve the shortage of physicians, non-physician providers such as the physician assistant (PA) and the nurse practitioner (NP) have been used in the USA since the 1960s to provide care to critically ill patients.

Physician assistants are focused on the medical domain and licensed to practice medicine in defined areas in close collaboration with physicians and with a high degree of professional autonomy. The physician assistant programme follows on from a Master's degree, and the tasks of PAs are to record the medical history, perform physical examinations, request and interpret additional testing, establish the medical diagnosis, carry out treatment procedures and prescribe medication.^[3] Nurse practitioners have completed a Master's degree and, under predefined conditions, are authorised to be able to independently select, indicate and perform certain medical procedures, such as catheterisation, defibrillation, elective cardioversion and surgical procedures. They can also order lab tests and diagnostic procedures such as endoscopy and punctures (e.g. bone marrow and joint puncture procedures), and prescribe "prescription only" medications.^[4]

In 2019, a review by Kleinpell et al. concluded that PAs and NPs are essential members of ICU and acute care teams. PAs and NPs are of value in patient care management, improving quality of care, enhancing patient safety and providing continuity of care.^[5] A number of articles show that PAs and NPs have a

positive impact on outcomes, length of stay, implementation of guidelines and cost control in critical care.^[6]

In a recent review article published in this journal, Kreeftenberg and co-authors described the current status of the advanced practice provider working in critical care in Dutch ICUs. The number of PAs working in Dutch ICUs is increasing, with a total of 51 PAs in 2020. The reasons for implementing PAs in Dutch ICUs are to replace medical residents in case of shortage or to address continuity of care.^[7] In this issue of the Netherlands Journal of Critical Care, Kreeftenberg and co-authors describe the results of a nationwide survey on the implementation of PAs in ICUs in the Netherlands.^[8] They provide a general overview of the extent to which PAs are employed in Dutch ICUs, what their tasks are and how they are appreciated. The data show us that PAs only work in high-volume ICUs and more than half of the ICUs are not implementing PAs to date. In the ICUs where PAs are working, it appears that this was either on top of the existing formation or to replace medical residents. This is interesting because ICUs therefore make a choice by focusing on quality versus quantity of the ICU staff. This contrasts with smaller hospitals where PAs have not yet been implemented. Several reasons are reported for this, namely no need for working with additional staff (e.g., medical resident or PA) next to the intensivist or no shortage of medical residents. Adding a PA in smaller ICUs may be of value in addition to the intensivist because they constitute a factor of stability and contribute to continuity of care and quality improvement. Reasons of a financial nature or that the time investment is too great are almost non-existent and therefore this is not a reason for not adding a PA to the ICU staff.

The PAs' performance with respect to communication with other physicians was rated by both the intensivists and PAs as less proficient than the intensivists' communication, but

better than that of the medical resident. In ICUs employing PAs, all performed low-complex tasks such as inserting arterial catheters and more than half performed medium-complex tasks such as inserting venous catheters; high-complex tasks such as emergency department consultation were performed least often. It is not surprising that PAs perform these tasks more proficiently than medical residents, as medical residents generally have no ICU experience in contrast to PAs who are usually former ICU nurses. Because of their previous working experience as an ICU nurse, PAs have better knowledge of local protocols and require less supervision from the intensivist. In addition, the medical resident rotates after a mean of 3-4 months whereas PAs constitute a factor of stability in the continually changing workforce in the ICU.

It should be noted that most of the PAs were former ICU nurses and one of the reasons to implement PAs in Dutch ICUs was to create a career perspective for ICU nurses. In the Netherlands, one of the biggest concerns at this moment is the shortage of nurses, particularly ICU nurses. In the coming years, this shortage of ICU nurses is expected to increase dramatically. To retain ICU nurses, it is important to create different career

perspectives in the ICU. The introduction of the PA in an ICU may be the solution to resolve the shortage of medical residents and ICU nurses. However, this creates another problem, namely that ICU nurses leave the nursing domain and are therefore no longer available for this purpose. Does not the solution lie rather in strengthening the position of ICU nurses and their added value in the medical domain? In that case, it would perhaps be more appropriate to place much more emphasis on the NP function in the ICU because the NP is positioned within the nursing domain as opposed to the PA. A fundamental discussion that needs to take place is how to make working in the ICU more attractive and future-proof for ICU nurses. Career opportunities for ICU nurses must be addressed from the perspective of how the best possible care can be provided and the composition of both the medical and nursing staff. The assumption is that this will contribute to optimal quality of care and continuity of care.

Disclosures

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