

This is my unit: N12 neuro-intensive care unit, UMC St. Radboud, Nijmegen, The Netherlands



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SUMMARY

- This article describes a neuro-intensive care unit (ICU) in The Netherlands
- The unit has six beds and is one of five ICUs that are based in the intensive care department
- The unit provides a neuro-specialist service for central Netherlands
- The daily routine and the role of the nursing and medical staff are described

INTRODUCTION

The Universitair Medisch Centrum (UMC) St. Radboud is one of eight university hospitals in The Netherlands. In 1951 the Faculty of Medicine of the then called Catholic University of Nijmegen was established. Then in 1956 the St. Radboud University Hospital was founded. From the beginning both organisations collaborated closely, which led, in 1999 to the merger of the two institutions under a new name: UMC St. Radboud (see Photo 1). The hospital has 953 beds, of which 41 are intensive care beds. N12 has six intensive care beds, and is one of the five intensive care units (ICUs) within the intensive care department of the hospital. In 2004 there were 28,341 admissions to the hospital, of which 2115 patients were admitted to intensive care. Of these, 306 patients were admitted to N12.



Photo 1. UMC St. Radboud (copyright foto@josjanssen.nl)

The Department of Intensive Care

The intensive care department is an independent medical and nursing organisation within the hospital, with its own management and budget. Patients of all specialties and ages (excluding neonates), including those patients within the most severe intensive care categories, are managed within the department. Currently, the department is divided into five ICUs, each with their own medical specialty. In the future it is planned to mix the various groups of patients. All ICUs support each other in medical care and occasionally with the deployment of nurses. The intensive care department also fulfils an educational function and provides consultation for all the ICUs in the regional hospitals. It also provides an intra-hospital (see Photos 2-3) and inter-hospital transfer service, which may also be used for the transport of intensive care patients between other hospitals within the middle region of The Netherlands.



Photo 2. Intra-hospital transfer

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Photo 3. The bed-mounted patient transfer system



Photo 5. N12 ICU

Since 2005 the intensive care department has had a long-term policy plan which sets out the aims of the intensive care department from 2006 until 2010. The plan includes the construction of a new intensive care department, consisting of six ICUs, each with eight beds. It is due to be completed in 2010.

Each intensive care unit is managed by a multi-professional team, consisting of an intensivist and the head nurse. Together they are responsible for the effective functioning and policies of each ICU. In each unit these policies are implemented by three senior nurses who each have their own area of specialist expertise: patient care, research and education. Intensive care department based projects are managed by three expert nurses with an academic education.

THE UNIT

Patients who have a neurological and/or neurosurgical disorder who require intensive care and therapy are admitted to N12 (see Photos 4-5). Typically, patients are admitted with diseases such as traumatic brain injury, status epilepticus, Guillain-Barré syndrome, meningitis, encephalitis, cervical lesions, and sub-dural and sub-arachnoid haemorrhage. Neurosurgical admissions include patients who have undergone surgical procedures for intracranial tumour, arterio-venous malformations, trigeminal neuralgia, insertion of intracranial pressure monitor for diagnostics, cervical lesions, cerebro-spinal fluid drainage, and clipping of cerebral artery aneurysms.



Photo 4. N12 ICU

The staff of N12 consists of 35 members, including the head nurse, senior nurses, a nursing assistant and a nursing aid. Working hours vary, with a minimum of 18 and a maximum of 36 hours per week. On average, we have two or three nursing students on our unit who are undertaking the nationally acknowledged two-year intensive care course. We also accommodate trainees from several nursing disciplines. Our team of intensivists, Fellow and Resident physicians of neurology and anaesthesiology is complemented by a physiotherapist, an occupational therapist, a speech therapist and a social worker. Since last year all intensive care nurses have also undertaken the role of Consulting Intensive Care Nurse (CIV). At the request of other colleagues they provide advice and carry out specialist nursing treatments on other nursing wards and medium care units.

The focus of attention in the care of ICU patients is on their needs and their environment. The UMC St. Radboud derives its nursing care theory from the works of Virginia Henderson and Suzanne Gordon. Nursing care plans and interventions are based on the following aspects: health and the health perception, vital functions, nutrition, metabolism and excretion, activities and mobility, pain, sleeping pattern, perception and thinking, expectations and perception of self, coping with stress, social situation, communication, values and life principles. These are documented in the admission history and the nursing report that we keep for each patient.

The ICU works with a system that assigns nurses to patients. For unit N12 this means that each nurse will be assigned responsibility for a minimum of one and a maximum of two patients. This assignment happens on each shift. We aim at efficient quality and continuity of care, so it is possible that a nurse can take care of one or two patients for a period longer than a single shift. The ICU nurses are supported by a nursing assistant and a nursing aid in the provision of daily care of the patient.

A TYPICAL DAY

A typical day starts at 07.30 with a central handing over of the patients by the night duty staff. After this, the patients are individually handed over to the nurses that are going to take care of the patients during the day duty. When the night duty ends at 08.00 check-ups are done, blood is taken, and a thoracic X-ray is taken if necessary. After these routine procedures the day shift nurses

continue with the general care of the patients, as required.

Each morning there is a structured consultation between nurses, resident doctors and the ICU intensivist. Each patient is reviewed and plans and arrangements are made for the following 24 hours. The previous 24 hours are discussed with the nurse that is responsible for the care, the senior nurse responsible for all of the patients, the ICU intensivist, and the Fellow and Resident physicians. We try to ensure that all necessary investigations and examinations are carried out during the day duty. The evening shift starts at 15.30 and ends at 23.30. The staff on the evening shift also has a central and an individual hand-over. When the day shift ends at 16.00, the evening staff commences its rounds for check-ups, medication and general care of the patients. This same routine is repeated when the night shift starts at 23.00.

MAIN ACTIVITIES OF N12 ICU

Care of patients

We aim to provide optimal healthcare for ICU patients in general, and specifically for ICU patients with disorders of the neurological system. We aim for the highest possible standards for patients, their family, friends and staff members.

Transfer of knowledge

We provide education and training for new staff members, nursing students and trainees. We also provide education and training for other ICUs and nursing units/schools regarding the care for patients who require neurological intensive care. We participate actively in the exchange of knowledge with other national and international hospitals.

Research

We support and participate in medical and nursing scientific research.

N12 ICU MISSION

To patients and family

N12 ICU offers professional and specialised care to patients and their family and friends. We distinguish ourselves by our specialist knowledge in the areas of neurological and neurosurgical nursing. Our ICU provides a specific service for the care of such patients. N12 ICU provides a safe environment for patients and their family and friends. Therein, we provide transparent communication that is concentrated on the needs and wishes of the patient and their family. We approach our patients and their friends in a respectful way which makes them feel accepted. This approach enables us to carry out nursing care from the patient's perspective, and we try to achieve this to the best of our abilities.

To our staff members

Staff members of N12 ICU respect each other and show interest in each other. Open communication, in which cooperation and safety are the most important values, and personal contribution is appreciated. We want to motivate ourselves by being willing to learn from each other and in doing so, improve the quality and expertise of our health care.

To the rest of the wards

N12 ICU is recognised for its professional and specialised care both within and outside the UMC St. Radboud.

N12 ICU VISION

Care of patients

N12 ICU wants to develop its specific field of study and use its acquired specialist knowledge, experience and expertise. Also, it wants to acquire new knowledge, experience and expertise in other branches within the discipline of intensive care. The ICU also wants to systematically perform the care of patients and where possible to develop and use standard plans for care. Furthermore, the ICU aims to base its practice on current quality standards and, as possible and appropriate, to ensure these standards are congruent with the quality of care expected by the patients and their families.

Staff members: cooperation

N12 ICU wants to give its staff members an amicable, safe and inspiring working environment. In this working environment it wants to motivate its members to maintain and develop their expert knowledge. Cooperation and the transfer of knowledge occupy the centre stage. Furthermore, the ICU wants to concentrate on expanding multidisciplinary cooperation within the unit and cooperation with the other ICUs within the department.

Transfer of knowledge and research

As a centre of specialist knowledge for neuro-intensive care, N12 ICU wants to concentrate on the education of nursing disciplines both within and outside of the UMC. Furthermore, it wants to concentrate on the exchange of nursing knowledge and multidisciplinary cooperation with other specialties, both within and outside the UMC.

Scientific research

Medical and nursing research is integrated within the ICU as much as possible and is of an equal quality. In the coming years we want to expand our nursing research. All research that is carried out within the ICU is judged in advance by the Research Committee. All research is judged on its quality, scientific method, practicability and feasibility and whether it should have a direct connection to the quality of health care. The way in which the research is carried out rests with the various trainee researchers and research nurses. The intensive care research group is a small group within the intensive care department. For nursing research there is a collaborative approach with the critical care lecturers based at the Hoge School Arnhem/Nijmegen.

Currently, there is a nursing research project about Outreach. The outreach project is aimed at the early recognition and diagnosis of important changes in physiological parameters of patients in order to treat their critical condition earlier. Current medical neuro-intensive care research is concerned with the use of norepinephrine versus dobutamine in cases of sub-arachnoid haemorrhage.

Summary

N12 ICU has six intensive care beds, and it is a pleasure to work there. Because the hospital has designated itself as a specialist

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referral centre we are able to gain in-depth knowledge about specific neurological and neurosurgical intensive care practices. Furthermore, we try to spread and increase our knowledge by means of congresses, conferences and internal education programmes.

Neuro-intensive care is a challenge because you never know

what is going to happen next. There can be a lot of psychological pressure in this type of healthcare environment because the impact, and often the suddenness, of the patient's illness demand a lot from family, bystanders and nurses. What makes our unit so special is that we work in a 'safe' environment in which we are able to express our own ideas and emotions.

