This is my unit: the Critical Care Unit of Austral University Hospital, Buenos Aires, Argentina.

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Introduction

The Austral University Hospital (HUA), which officially opened in September 2002, is located in Pilar in the province of Buenos Aires, Argentina (see Photo 1).

Photo 1. The Austral University Hospital

According to the 2001 census, Pilar has 233,000 inhabitants. A third of its population is between 0 and 14 years of age and quarter of the population is aged between 15 and 29 years. The population age structure indicates that 75% of people are under 45 years of age, showing a large proportion of young people compared to other towns. The HUA is built on a 9 hectare location with 40,000 square metres of smart building. The hospital shares this building with the Schools of Nursing and Medicine of the Austral University. The HUA is a university organisation devoted to assistance, education and biomedical research; and committed to seeking the truth and promoting a culture of life that places special emphasis on the quality of work. It focuses its work on serving the person as a whole and fostering human and Christian values, as expressed in its mission. It is a private, multi-disciplinary institution dependent on the Austral University Principal's Office.

The HUA is equipped with 81 beds delivering a range of services: Adult General Admission, Paediatric and Neonatal Admission, Obstetrics, Adult/Paediatric Critical and Intermediate Care, Bone Marrow Transplant Unit, Emergency Unit, Surgical Unit, Anaesthesia Recovery, Haemodynamics Laboratory and Day Hospital. The institution performs education and promotion of health activities free of charge through the Mobile Paediatric Unit. Since its opening in June 2005, the hospital has admitted a total of 132,688 patients (including external consultation, emergencies and admissions) During the last two years, the average length of stay of patients is 3.8 days and recent statistics show the occupancy ratio as between 70% and 80%.

The unit

The HUA is a developing hospital, which due to the limited availability of financial resources is not fully equipped with a full range of services. This is a consequence of the current state of Argentina's (private) health system and the country's economic policy. Services have been authorised according to demand. This requires a flexible approach to manage human and material resources according to changing and peak periods of demand. This is one of the reasons that the intensive care unit (ICU) is a shared facility between adult and paediatric patients. Patients not requiring intensive care are referred to the intermediate care unit or the general admission section of the hospital. The remainder of this article focuses on aspects of adult ICU patient care.

The ICU has nine single rooms aligned side by side, of which two are used regularly by paediatrics. They are spacious, with good lighting and have large, wide windows overlooking the park (see Photo 2). Technology and equipment are provided according to the patient's condition.

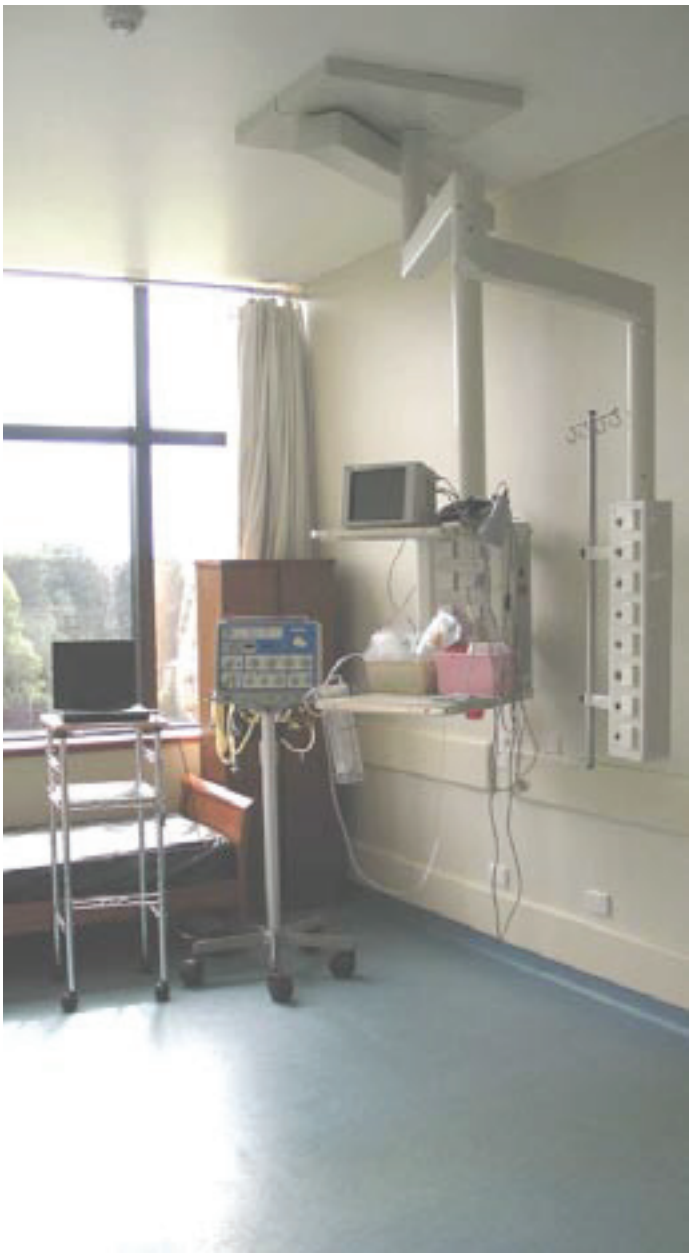


Photo 2. A typical ICU room

The unit has a rectangular layout with the rooms facing the nursing station. Three out of the nine beds have private bathrooms; the remainder are cubicles with clear sliding doors that allow a view of the whole room. The nursing station has a row of comfortable desks with their respective computers, a central monitor and a system of video cameras that allow patient monitoring (see Photo 3).

Photo 3. The nurses' station

Equipment

Despite the limitation of resources mentioned above, the unit is well-equipped with a cardiac arrest trolley with defibrillator, counterpulsation balloon equipment, haemodyalisis equipment, microprocessor-controlled ventilators and multi-parameter monitors. The medicinal gas controls and power sources are located in a mobile mechanical arm, which allows positioning of the electric bed, with individual handling control in four directions. Room temperature, music and television can be adapted to meet the patient's or relatives' needs. Relatives have a large comfortable room, where they can wait, and we are working on an open visiting policy providing a wide-ranging schedule for the stay of relatives in the unit.

Nursing Management

As a conceptual framework for the provision of care, the unit has adopted Virginia Henderson's Model of nursing, which incorporates our Mission, Vision and Values. Our Mission is to deliver top human, technical and scientific quality nursing care, through programmed and permanent education; considering the individual as a whole, to facilitate the protection, recovery and maintenance of the highest level of health possible in a framework that fosters the moral and cultural values of the Christian doctrine. Our vision is to turn care into the fundamental value and to participate in multidisciplinary teams contributing to our professional knowledge. Our team members will experience love of their work and will feel that their performance positively contributes to their lives. Our values are a commitment to seeking the truth, promoting a culture of life, quality of work, serving the individual, and development of human and Christian values.

The unit is managed by an Area Coordinator who is subordinate to the Nursing Director. The Area Coordinator manages the provision of care and supports educational activities. Other support staff includes the Infection Control Nurse and the Respiratory Care Nurse, whose main tasks are to advise on the best care and intervention possible in their respective fields and to develop evidence-

based care protocols. Each new nurse to the unit staff undergoes an induction programme, which is characterised by activities that reflect the Mission, Vision, Values and Model of the institution.

Patient Profile

The ICU admits patients referred from other areas of the hospital or other institutions; both public and private. Figure 1 shows the origin of admission during the last three years, and demonstrates the predominance of admissions from emergency and operating rooms. These patients belong to the private sector of the health system, supported mainly by the voluntary insurance sub-system financing all care services expenses.

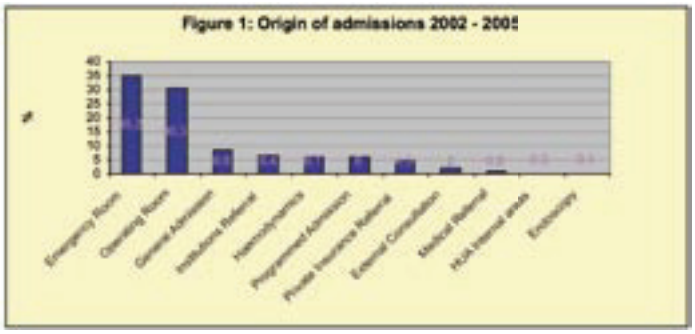
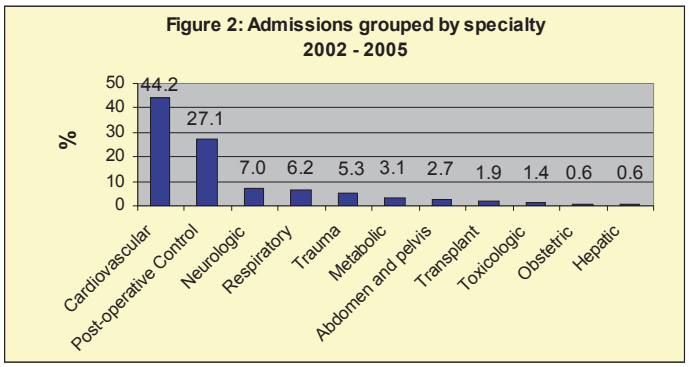


Figure 2 shows the most common reasons for admission during the same period, with a distinct predominance of cardiovascular and surgical patients.



The admission of patients to the unit is a medical decision, based on a set of guidelines that support decision-making. Table 1 shows the number of adult patients admitted into the unit who stayed more than 24 hours. The average length of stay of patients during the first half of 2005 was 6.04 days, which was higher than last year's average due to the increase of patients with significant injuries who required extended recovery. This table also illustrates the growth since the hospital opened until June 2005.

A typical day for the patient

A day in the life of a patient starts early in the morning. Electrocardiograph (ECG) recordings, blood tests and X-rays precede breakfast. This is followed by the ward round, which includes doctors, nurses, physiotherapists and students. During the round decisions are made about new therapeutic interventions and treatments based on assessed changes. Patients and relatives are given feedback about the patient's health status and future therapeutic and nursing care decisions. The priest and volunteers are also part of the unit team. At lunch, tea and dinner time patients enjoy the company of their relatives. During the evening those patients that do not undergo procedures stay with their relatives; and nurses continue with care activities (such as monitoring, drug administration, et cetera). After tea time and dinner, patients are prepared to rest for the night.

Nurses

To work in ICU nurses are required to have the basic course or first level qualification (Professional Nurse), or a degree course or second level qualification (Licensure in Nursing), plus evidence of one to two years' experience with critical care patients. Some staff are currently undertaking second level education. Due to the lack of a formal framework in universities for nursing specialist education, nurses attend courses in their own discipline or multi-disciplinary courses. Nurses who can afford to undertake a specialist nursing course abroad are supported by the Nursing Director, who facilitates the process at an institutional and international level.

First and second level nursing degree students from the Nursing School of the University, come to the ICU for clinical practice experience, and are guided by the staff nurses and the students' subject educator. The staff participates in teaching activities such as direct supervision, classroom and in-service teaching, as well as research activities in collaboration with the Patient Quality and Safety Team.

Nursing staff comprises of 17 nurses and there are five different shifts: morning (7am-2pm), evening (2pm-9pm), alternate nights (9pm-7am) and weekends and holidays (7am-9pm). Nurses that have morning, evening and night shifts work 35 hours a week and those working weekends and holidays, 28 hours. To maintain an adequate nurse/patient ratio, intermediate care unit nurses work in the ICU during periods of higher demand. The unit employs a nursing assistant who manages the stock of disposable supplies and keeps the equipment in good working condition.

Year	Admissions	Days of stay	Average stay	Stay Ratio
2000 (May-Dec)	103	470	4.95	3.25 - 9.14
2001	273	1297	4.89	2.6 - 7.78
2002	340	1488	4.65	2.56 - 6.91
2003	341	1859	6.12	3.07 - 15.75
2004	368	2247	4.89	4.16 - 12.25
2005 (Jan-Jun)	163	1026	6.04	3.47 - 8.36

Table 1. Admissions and average length of stay since HUA opened

Nursing care and management and multi-disciplinary team members

Delivery of nursing care is holistically oriented and each nurse is responsible for all aspects of patient care. The nurse/patient ratio is 1:1, 1:2 or 1:3 according to the patient's level of dependency. Nurses perform and assess haemodynamic and respiratory monitoring interventions, administer medicines, participate in procedures, assist relatives, interact with the medical staff and other members of the health care team. Currently we have a care management project in progress, in which we are developing a nursing care process that is based on Virginia Henderson's Model. As part of this project a series of nursing care protocols is being developed.

Computerised Nursing Record

The hospital management utilises the Hospital Information System (HIS) for clinical records and hospital procedures, in which nurses also play a role. This system makes it possible to open and access clinical records in real time from any computer connected to the institution intranet. Within HIS we have the Nursing Documentation System: the Control Panel (Panel de Control; see Figure 3). The control panel allows nurses to enter all the observations and interventions performed with each patient by means of different display options which can be reached through their corresponding icon on the main screen (monitoring, vital signs, fluid balance, nursing diagnosis, care programming, nursing comments and evaluation, quick measurements and medicine programming).

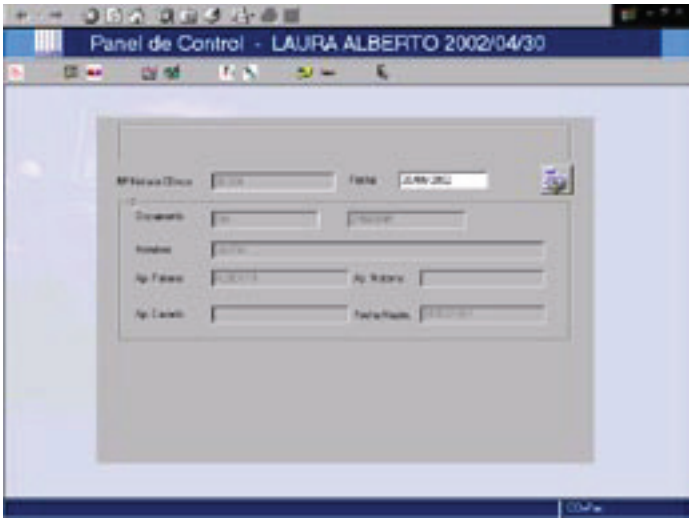


Figure 3. Control panel

Each icon is sub-divided into features that provide a quick view of the patient's status. The feature 'Care Programming' allows the recording of supplies and disposable materials used in each intervention. Interventions can be entered according to the necessities proposed by the Henderson's Model or following the North American Nursing Diagnosis Association (NANDA) statements (see Figure 4).

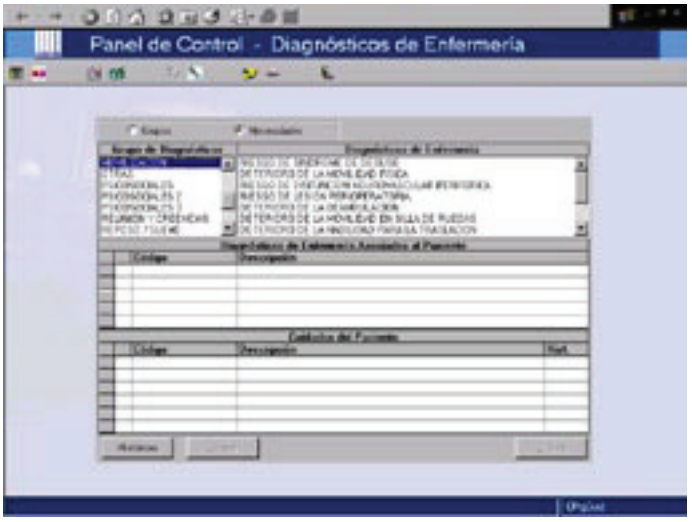


Figure 4. NANDA statements

Although the system allows the documentation of interventions according to NANDA diagnoses or needs, at present, there is only partial compliance by nurses. For this reason diagnosis difficulties and the system's usefulness are being evaluated, taking into account nurses' feedback. As a quality control measure, two annual meetings are held to address problems of patient care and stress the relevance of proper vocabulary and model application. There is direct communication with medical staff, physiotherapists, nurses, inter-consultant physicians, nutritionists, bioengineers, students, priests, volunteers, rotating staff and nursing directors.

Research and development activity

Nursing research in Argentina is in its infancy. In our institution and the ICU we are not indifferent to the situation; as a teaching unit, there is an intention of promoting nursing participation in research. This year the opening of the "Patient Quality and Safety in Nursing" area has encouraged some projects, such as assessment of the critically ill patient's skin care, detection of errors in medicine administration, and assessment of personal care from the perspective of patients and caregivers. There is strengthening of evidence-based care plans, with greater integration of educators into the field. Staff educational activities such as classroom lectures, workshops and in-service bedside training are developed. Nurses also participate in gaining funding to support attendance at national and international conferences.

Conclusions

The developing critical care unit demands creativity, commitment and a good skill-mix of nurses. In this context, permanent efforts are needed to maintain high quality, cost-effective and above all holistic and humanistic care, in accordance with our mission. Likewise, we have to be loyal to our values and promote the development of research and evidence-based practice, encouraged by our vision of turning care into "the fundamental value," which is the real challenge.