

PHARMACOLOGY IN THE ELDERLY - WHAT NURSES NEED TO KNOW

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The title of this paper assumes that a formula exists for the nurse educator in relation to the therapeutic knowledge required by students of nursing.

Perhaps the first question to be asked is 'What is Nursing?' - a statement which has led to many academic debates over the past few decades.

The earliest definition on Nursing quoted in modern literature comes from Ceylon in the 2nd - 3rd century B.C. At this time Nurses were obviously expected to compound drugs as part of their many and varied duties, it states:-

'The nurse must be clever, devoted to the patient and be pure in body and mind, must know how to compound drugs, be competent to cook food, skilled in bathing the patient, conversant with rubbing the limbs and massage, with lifting the patient and assisting him to walk about, well skilled in making and cleaning beds, ready, patient and skilful, never unwilling to do anything that is ordered.'¹

In highlighting her difficulty in defining Nursing, Nightingale² does not mention the compounding of drugs, but does suggest that the administration of medicines and the application of poultices were seen as important tasks for the nurse to perform, often taking precedence over what she believed to be more important issues in nursing.

The twenty-first century has seen a proliferation of definitions in Nursing. I can think of none which actually highlight the giving of

medicines, rather, they have chosen to concentrate on the holistic approach to patient care and the nurses' role. Perhaps the most famous definition of modern times is that of Florence Nightingale, who said:

'I use the word nurse for want of a better - it has been limited to signify little more than the administration of medicines and the application of poultices. It ought to signify the proper use of fresh air, light, warmth, cleanliness, quiet and the proper choosing and giving of diet - all at the least expense of vital power to the patient.'

As we can see Nightingale puts the emphasis on the environment, she goes on to say:

'We must put the patient in the best condition for nature to act upon him and furthermore that the hospital should do the patient no harm'.

When one considers the number of potent drugs given to some elderly patients (often referred to as polypharmacy), their known side effects, and the problems related to adverse drug interactions, one wonders what Nightingale would have to say on the subject today.

A more recent definition of Nursing, was that of Virginia Henderson - an international nurse now in her 90's. She states:

'The unique function of the nurse is to assist the individual, sick or well in the performance of those activities contributing to health, or its recovery (or to a peaceful death) that he would perform unaided if he had the necessary strength, will, or knowledge and to do this in such a way as to help him gain independence as rapidly as possible'³.

Whilst there is a lack of any direct reference to the giving of medicines within this and many other definitions, one can assume that it is implied, as the individual normally responsible for taking his own medication whilst in the community.

Despite the introduction of hospital pharmacists, the fact remains that the giving of prescribed drugs to patients in hospital continues to be seen as the responsibility of the nurse.

CURRICULUM DEVELOPMENT

If nurses continue to accept this responsibility, then nurse educators must ensure that the curriculum reflects the total knowledge required by the nurse practitioner (not the doctor or pharmacist) within a client group - in this instance the client group being 'the elderly'.

Over the years one has seen many changes regarding the input of therapeutics in nurse education.

From a personal perspective one can remember a few almost incomprehensible lectures from the hospital pharmacist. A series of chemicals appeared on the board and one was expected to learn them by heart for 'the exam'.

Many years later as a tutor student one could still hear student nurses complaining about their 'pharmacy lecturers'.

Then as now, students were keen to pass exams, so in the main they concentrated on learning facts:-

- Classification of drugs
- Routes of administration
- Normal drug dosage (and how to calculate them)
- Known side effects of common drugs

To be fair more recent curriculae have reflected a greater input on pharmacodynamics and pharmacokinetics, but students have not always been able to assimilate this knowledge into an effective model of care.

NURSING MODELS

What are these models of care? Nursing has traditionally followed a medical model. That is, they looked after the heart patient in bed 6, or the renal patient in bed 15. Patients cared for, using the medical model need tasks performing - observations, washing, bedpans, pressure area care, and of course the Medicine Round. These tasks are a few of those 'Routines and Rituals' identified by Walsh and Ford⁴ which are performed every day by nurses using a medical, some would say, industrial model of care.

Nursing in the nineties, however, demands a new approach - 'A Nursing Model'. Notice I used the term A Nursing Model as there has been a proliferation of Nursing models over recent years. Now it is possible to use an appropriate model of care for the client group being cared for i.e. the acutely ill, the chronic sick, the elderly or the mentally ill. An explanation of these models would take too long here, suffice to say they are humanistic rather than mechanistic in their orientation, and demand a holistic, problem solving approach to care - using the Nursing Process as a framework, it is a vehicle for our beliefs, values, concepts and goals.

Fortunately for the curriculum planner the nurse theorists have agreed on four interrelated elements of Nursing as a base from which they have developed their models. These are the person, health, society and nursing.

If we take each of these in turn, we can identify what the nurse needs to know in relation to the administration of drugs to the elderly.

THE PERSON

If we take the person as our elderly client/patient, the nurse has to understand that this client group is just as heterogenous as younger ones. Their needs differ, be they physical, psychological, social, cultural or spiritual.

In order to give effective care to this elderly person the student needs an understanding of:

(a) normal physiology and the aging process - this knowledge should help students make sense of their lectures on pharmacokinetics and pharmacodynamics in relation to the elderly patient, for example a diminished renal function may be expected in the elderly.

(b) the psycho-social aspects of aging - this could include:

- motivational theory - Maslow's⁵ hierarchy of needs can be very useful here.

- learning and forgetting theories - should enable the student to find ways of teaching the elderly and their relatives about their illness and therapeutic regimes. The students should also be evaluated on their teaching skills.

- adaptation theory - the elderly when removed from their homes, need to be helped to adapt to their new environment, be it residential home or hospital - otherwise they become confused or disorientated and may be given drugs inappropriately.

HEALTH

Ask any group of students what their view of health is and you will get a variety of answers. This exercise helps students understand that we each have our own view of health. WHO⁶ defines health as:

‘a state of complete physical, psychological and social well being and not merely the absence of disease or infirmity’.

Whilst this definition has its critics, it should help the student to think further than the disease process and more towards improving the overall functional ability of the elderly, and hopefully an improved quality of life. Within this sphere of knowledge, students also need to understand the principles of health education and health promotion.

SOCIETY

Students abroad do not always have the benefits of the Maltese when studying this topic. Being a small island, students usually have a good idea of how the elderly live. However, sometimes one is surprised to find that students have spent their early years with tunnel vision, seeing only what was of interest and concern to them.

It is important therefore that students go out into the community and look afresh at where and how the elderly live, what they eat and what recreational pursuits they follow.

The students also have to understand how society in general will have

affected the elderly persons' view of illness and compliance. In any modern nursing curriculum one should find a unit on Medical Sociology, considering such topics as:

- The Sociology of Illness Behaviour
- The Sick Role
- Compliance in Health Care
- The Doctor - Patient Relationship
- Inequalities in Health
- Medicalisation of Life

Students, in the main, find these topics interesting and relevant to all aspects of their course.

NURSING

This obviously is the element of the curriculum which can appear the most simple but in essence is the most difficult.

At the centre of nursing is the Nurse Patient Relationship, the quality of which will directly affect compliance. This relationship is unique and special. When we get it right it is a joy, when we get it wrong it can be disastrous. It is a relationship based on caring and trust, concepts which have been well defined by Mayeroff⁷ and Rogers⁸ respectively.

CONCEPTS

Through an understanding of these and other concepts such as pain, stress, body image, loneliness, helplessness and hopelessness to name but a few, the nurse can help the elderly person with their drug therapy. They can also help the individual and their family come to terms with their illness/situation. Henderson³ talks about the need to get inside the skin of a patient, it is obviously difficult for an eighteen year old student to get inside the skin of an eighty year old immobile patient, but given the appropriate learning opportunities, many achieve it.

SKILLS

Of course nursing also requires many skills. Apart from nursing skills the nurse has to be accomplished in observing and monitoring the patients' medical condition, and reporting relevant changes to the physician or surgeon. The skilled nurse is in an ideal position to monitor

both the positive and negative effects of medication, be it a rash, hypotension, confusion or level of consciousness.

To neglect this aspect of care would therefore be irresponsible. However, there are many times when physicians demand unnecessary observations: this is both inexcusable and counterproductive. On a busy ward especially when short of staff, the nurse in charge has to make decisions on the priorities of care required. This includes a decision on whether to carry out what she considers unnecessary observations when more important care is required.

NURSING RESEARCH

Underspinning all their knowledge and skills is the application of Nursing Research. Nurses need to understand the value of research - few may want to carry out research - but all students of nursing need to develop a spirit of enquiry. To ask 'why' and keep asking why until their queries are answered - either by a more knowledgeable professional or through books and journals, always supposing these are available.

NURSING MANAGEMENT

The drugs bill in any country consumes a large slice of the total health budget. Nurses need to take more interest in the economical use of drugs, dressings and lotions - this includes a knowledge of shelf life and storage requirements. Nurses have to understand that there are no such things as free medicines, dressings etc - they are either paid for out of public taxation or health insurance.

NURSING ETHICS

Last but not least Nurses have to debate ethical issues in relation to drugs and health care generally. The medical profession is often deemed to be the authority on ethical decision making in health care, but Melia⁹ highlights the ethical dimensions in everyday nursing care. As she points out, doctors may order treatment, but it is the nurse who is expected to carry it out.

CONCLUSION

In this paper, I have attempted to outline the knowledge required by today's nurse in relation to the giving of drugs to elderly patients/clients.

This daily task has been shown to have a clinical, psycho-social, economical and moral dimension. The nursing student has therefore to be introduced to a wide range of topics over and above the usual therapeutics and nursing skills input. It is the nurse educators' responsibility to help the student fit all these different elements into a framework for nursing practice, rather like a complex jigsaw. A successful outcome is very satisfying.

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