INFORMATION IS *POWER*

REFLECTIONS ON THE CONFERENCE AND WORKSHOP *THE IMPACT OF COMPUTERS ON NURSING* HELD AT CHURCH HOUSE, WESTMINSTER AND AT THE NATIONAL HEALTH SERVICE TRAINING CENTRE, HARROGATE, YORKSHIRE — SEPTEMBER 8 — 15 1982

PAT HARDCASTLE

OPSOMMING

Rekenarisering in die verpleegpraktyk is nodig om in die toenemende behoefte aan inligting te voorsien. Rekenaars kan die verpleegkundige vir direkte pasiëntsorg vrystel.

Die skrywer gee 'n toekomsblik oor die moontlike gebruike van rekenaars in die saalsituasie, verpleegonderwys en verpleeg-administrasie.

WHY COMPUTERISATION?

If one thinks about the statement *Information is Power*, it is true in every sense of the word that the person who holds the most information has the power to act. **Where does this leave us as nurses?**

We are just beginning to emerge from nearly a century of being on the receiving end of crumbs of information and, as a result, being a rather powerless body. The need for information in the battle for resources to run our health service is increasing day by day.

What do we have to do today to obtain information which is usually needed in a hurry to satisfy some shadowy figure in a distant office? Usually there is a scramble for files and pages of figures (if you can find them!), and then the laborious sorting of the information required. It is quite surprising how many requests for information are all variations of one piece of information.

To have such problems thrown at one constantly is both time consuming and annoying. Nurses should have information at their finger tips in management, clinical care, education and research. This can only be provided by computerised systems which can give the information in several different configurations from one basic set.

Men have been to the moon and it is old hat to be rocketted into space. We have reached the 25th anniversary of the space age. Miss Sheila Collins OBE, in her address at the London Conference, said that it was *no longer appropriate to use the horse and buggy in the Space Age*. I am very much in agreement with her. We, as nurses, have to use our resources wisely because they are not infinite.

To do this, we require accurate information, quickly and in the form that it is required.

Nurses are always managers whether at operational, middle, senior or top management levels. In order to manage one's resources effectively information is needed at all these levels. As everything we do impinges ultimately on patient care, the information generated at the bedside needs to be channelled upwards. As each level of management uses it, the same information is tapped in different ways. The phrase *a cascade of information* was coined at the Harrogate workshop — one source of information, but spreading to a wide field.

Can we afford not to look seriously at computerisation? Nurse manpower is becoming very expensive. We therefore have to have systems which will release nurses to do what they were trained for, that is, looking after people. A computer, once the system is fully operational and understood, can release nurses to the bedside.

REFLECTIONS ON THE FUTURE

On the last day of the workshop we were asked by the last speaker to close our eyes and think of nursing beyond the year 2000 and what it would be like. I thought of the hos-

pital because that is my field. My interests in the hospital are management, education, clinical care and research and my mind wandered into all these areas. I had seen some systems with nursing applications in operation in the United Kingdom, at Exeter, Glasgow and Dundee, and I had heard about many others in operation in other parts of the world from the speakers at the Conference and workshop. My mind was therefore very alert to the possibilities.

The ward

Where shall I begin? I sit in an office and attend meetings so I shall go to the area where all the action is, and that is the ward. What nurses do to patients concerns me intimately because the type of care the patient requires should influence the category of staff we deploy. A computerised care plan which has a work load index can give me the information.

How do we get the plan in the first instance? I see an information sheet displayed on the visual display unit (VDU) which is at the bedside, into which the patient can either type answers to the questions, or talk and the conversation will be recorded and translated onto the VDU. I see the computer taking the information and in response, giving the care plan on the VDU. The nurse then checks and adds any other information.

The nurse who carries out the care will type responses or tell the computer, and we will be in a virtually chartless world. In fact, if there was a small computer at every bed linked via a network to the computer at the nurses station, which is in turn linked to the nursing administration computer, the need for written reports would become totally redundant. Programmes could summarise, analyse and give graphs, histograms or any other types of data analyses.

The doctor would prescribe on the terminal at the bedside, both for treatment and medication. The orders for the day would be summarised on a print-out for the ward sister. She would be advised how best to deploy her staff by the computer, which would have been programmed with the categories of nurses on the shift. All orders for medication would be transmitted to the dispensary, they would be executed and despatched to the ward by pneumatic tube.

The sister would have her own terminal. All requisitions for consumables would be transmitted directly to the store. Current price lists would be available on the VDU. Cumulative costing would be displayed on demand and the sister would know if she was within her budget. This system could be linked to the bedside terminal and all items used by the patient could be costed out. Control of consumable items would be enhanced.

The sister could also record sickness, absence, off duties and reports on members of her staff. This would be linked to the computer in nursing administration. Details of all practica undertaken by the students could be transmitted to the nursing education section and nursing administration.

Nursing Education

From the ward, my mind wandered to the nursing education section. Computer assisted learning (CAL) and computer assisted instruction (CAI) will be commonplace. Plato systems will be available for learners to do programmes at their own pace and have self-evaluation modules built in. The programmes will cover all aspects of the course the nurse undertakes. Interaction between learner and computer will be the norm and interplay between computer, videotape and recorder will enable life-like demonstrations. The tutor will be facilitator, guide and mentor. Libraries will be computerised and information required will be displayed on the VDU on request. The computer thus doing all the searching in a fraction of the time that a human could do it.

Student records will be fed directly to the administration, thus eliminating duplication. Details of training can then be transmitted directly to the South African Nursing Council to keep their records up to date.

Nursing Administration

In the nursing administration section, all the personal details of staff would be computerised, linked with payroll, the SA Nursing Council and SA Nursing Association. There should be an almost complete elimination of the need for postal services between the service organisation, educational institution and professional organisations. Allocation lists, rotation lists and leave lists would be displayed on demand, or a print-out could be requested. The SA Nursing Council rules and regulations would be updated from the Council's central office via a word processor and transmitted to each institution linked to the network.

The information generated at all levels would be available for research, easily retrievable and able to be analysed in several ways. Information to be transmitted downwards from the highest level would be computerised and updated through a word processing facility. At ward level there would be no paper notices. All information required at this level would be available via a menu on the VDU. It would be updated directly from the central administration office. New policy or instructions would be displayed daily with *what's on* in the hospital and staff would always be kept up to date. *What's on* would be a detailed programme available daily, stating what lectures, demonstrations and other items of interest would be taking place in the hospital and what entertainments would be on in the community.

POSSIBLE?

Am I being unrealistic? I do not think so, because most of the systems I am talking about are available in similar form, but sometimes for different purposes. The need will be for experienced people to specify exactly what is required as regards information systems.

With knowledge doubling every five years, the need to store and retrieve information at the push of a button becomes vital. Look at all the reading which circulates in our hospitals. It is virtually impossible to read it, let alone remember it.

Nurses are working fewer hours per week and the interaction with members of the health team requires information which is accurate, concise and not subject to misinterpretation. Information has to be complete for medico-legal reasons. Safeguards have to be built in to all we do in the care of patients

and the execution of orders.

The cumulative care plan generated when the patient is discharged is the link to the community. I see in my crystal ball a computer link with community services and the transmission of data direct to the future care giver. A complete record of the health of the patient from pre-natal times to death will be available. This will be on a micro-chip attached to the person's identity card.

Do you think it is possible? — I do.

VOLTOOIDE NAVORSING COMPLETED RESEARCH

DIE OPLEIDING VAN BLANKE VERPLEEGKUNDIGES IN PSIGIATRIE IN DIE REPUBLIEK VAN SUID-AFRIKA — 'N EVALUERINGSTUDIE

Leana Ria Uys
D.Soc. Sc (Verpleegkunde)
Verpleegkunde
Universiteit van die Oranje-Vrystaat

Alhoewel Blanke verpleegkundiges al vanaf 1891 in Suid-Afrika opgelei word om psigiatriese pasiënte te versorg, het die grootste ontwikkeling in hierdie opleiding gedurende die laaste vyftien jaar plaasgevind. Na hierdie vinnige groeiperiode het die tyd vir konsolidasie aangebreek. Verpleegkundiges in psigiatrie moet hul huidige posisie in oënskou neem, hul geskiedenis in ag neem en met die oog op die gemeenskap se gesondheidsbehoeftes en huidige opvoedkundige-tegnologiese ontwikkelinge, 'n rigting en strategie vir die toekoms kies.

Die doel van die navorsing was dus om 'n omvattende beeld te gee van die geskiedkundige ontwikkeling van psigiatriese verpleegopleiding in Suid-Afrika, sowel as die huidige aard van opleiding, insluitend die kurrikula en evalueringsmetodes.

Benewens 'n literatuurstudie van die geskiedkundige ontwikkeling van die opleiding is die tipologiese metode gebruik. 'n Omvattende literatuurstudie van kurrikulumontwikkeling het as teoretiese model gedien vir die evaluering van die opleidingsituasie. Besoeke is aan al die opleidingskole vir Blanke psigiatriese verpleegkundiges in die land gebring, waar inligting met behulp van semi-gestruktureerde onderhoude versamel is. Dokumente van die Suid-Afrikaanse Raad op Verpleging (SARV) is bestudeer en sewe universiteite in die Verenigde State van Amerika is besoek om as verdere vergelykingsbasis te dien.

Die geskiedkundige oorsig het getoon dat die opleiding van verpleegkundiges in psigiatrie omtrent saam met dié van algemene verpleegkundiges begin het en die opleiding redelik tred gehou het daarmee. Later het hierdie aspek van die gesondheidsdiens egter geïsoleerd geraak en die opleiding het verswak. In die tydperk van 1932 tot 1960 was swak fasiliteite vir pasiëntversorging en opleiding, oorbevolkte hospitale, 'n tekort aan studente en lae opvoedkundige toelatingsvereistes vir opleiding hoofsaaklik verantwoordelik daarvoor dat die opleiding allerweë as swak beskou is. In die sestigerjare het die opleiding drasties verbeter met die opleiding van die eerste psigiatriese verpleegkundiges as dosente, die verhoging van toelatingsvereistes en die instelling van universiteitskursusse wat lei tot registrasie as verpleegkundige in psigiatrie.

Die vergelyking tussen die opleiding wat tans in Suid-Afrika gegee word en die teoretiese model het groot leemtes in die huidige kurrikula getoon. Programdoelstellings en die filosofie waarop dit gefundeer is, was selde teenwoordig. Stadiumdoelstellings en 'n konseptuele raamwerk wat kan help om leerondervindinge te kies, was ook gewoonlik afwesig. Onderrigmetodes wat oor die algemeen gebruik word, het nie goed by die vakinhoud aangepas nie en sekere fasiliteite, veral biblioteekfasiliteite was gebrekkig. Die 960 uur van kliniese praktika is weens gebrek aan duidelike doelstellings en kriteria om dit te evalueer, nie deeglik as leerondervinding benut nie. Die dosente se belangrikste akademiese aktiwiteit was formele graadstudie in ander vakke as psigiatriese verpleegkunde. Ander aktiwiteite soos publikasies en navorsing was uiters beperk, so ook professionele aktiwiteite. Organisasie van leerondervindinge het grotendeels arbitrêr geblyk te wees en evaluering van kliniese vaardighede ondoeltreffend. Evaluering van kennis het meestal slegs op laer vlakke van kognitiewe funksionering plaasgevind en die evalueringsformaat was nie besonder betroubaar nie.

In vergelyking met die Amerikaanse programme doen die Suid-Afrikaanse student baie meer kliniese praktika, maar hierdie praktika is 'n baie minder intensiewe leerondervinding. Die hele proses van kurrikulumbeplanning is baie meer gesofistikeerd in die VSA as hier te lande. 'n Wyer verskeidenheid fasiliteite word vir praktika gebruik, maar in sommige opsigte is die Suid-Afrikaanse verpleegkundige praktyk meer terapeuties van aard as die Noord-Amerikaanse. Die opvoedkundige standaard van die Amerikaanse dosente, sowel as hul akademiese en professionele aktiwiteite, is oor die algemeen baie hoog.

Die aanbevelings wat uit die navorsing voortgevloei het, poog om die proses van kurrikulumbeplanning 'n sentrale rol in die opvoeding van verpleegkundiges in psigiatrie te laat speel en dosente in staat te stel om hierdie proses effektief te gebruik. Sekere aktiwiteite word by dosente aangemoedig, soos byvoorbeeld om te publiseer en nagraadse studie in psigiatriese verpleegkunde te onderneem. Veranderinge in die regulasies, direktiewe en evalueringsmetodes van die SARV word ook aanbeveel, soos byvoorbeeld dat meer spesifieke kriteria ten opsigte van kliniese praktika voorgeskryf word ter aanvulling van die huidige aantal ure.