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#### **Abstract**

This article looks at how Information and Communications Technologies (ICT) could be used to assist nurses in their day to day duties within a hospital ward. Current problems faced by nurses with the use of the manual systems, are explored particularly as regard to care plans. As a result, possible solutions are presented and the likely barriers that may hinder their realisations.

### **The use of ICT for nurses in the ward**

#### **Introduction**

There is no doubt that nursing has evolved and so has technology. But the question remains as to how well the use of Information and Communication Technologies (ICT) is embraced in the field. It is possible to suggest that the large amount of paperwork handled by nurses daily in the ward, could be reduced significantly if ICT was to be exploited to its full potential.

In spite of the fact that A&E and intensive care units seem to enjoy state of the art ICT systems, it is a contrast from admissions wards to care of the elderly.

#### **Problems with the current working practices**

Nurses spend a large amount of their working day dealing with all types of information such as clinical records, haematology results, ward management material and so on (McGuire and Stoddart, 2004). From writing patient care notes by hand to documenting all sort of charts are only part of a series of administrative duties manually deployed in the field. It would be great to cut down on the paperwork, so that nurses could focus on traditional care giving duties, but yet, every note entered in the patient care plan is important for the treatment and monitoring of care.

The use of ICT has proven to be rather effective in other fields such in education, law, manufacturing, banking and others. Let us not forget and respectfully acknowledge the difference of information processes involved in all these disciplines. However, the common form of task that they all perform at some points or all the time, is some kinds of data entry whether manually or electronically, of which when stored, is treated as information.

Fieschi et al (2004) highlight the need for hospital information systems (HIS) to give support to nurses in their clinical and managerial duties. Furthermore, Fieschi et al also indicated from his research in the use of ICT in German hospitals, that management applications are still more frequent than clinical applications, in particular clinical patient record systems. Although it could be argued that if a similar research was conducted in UK's hospitals, findings could be different, but the problem still needs to be solved.

### **Proposed solutions**

Thus, time has come to advocate the development of a system that would automate the content of patient care plan. This would reduce the stress level of excessive writing amongst nurses and perhaps even stimulate job satisfaction. According to Strachen (2004), saving time is often the most sought after benefit provided by a computerised care planning system.

The computer can automatically insert into the care plan, the patient's problem list, medication list, etc, and provide drop-down lists to select options for self-monitoring and crisis plans (Tracey and McAuley, 2000). What seems clear from Tracey and McAuley's ideal computerised system, is that it would have to be part of a wide area network that is linked with doctor's prescription system.

Thanks to current research and development, there is already a number of systems available in the market to address some of the problems posed by manual care plans. *Care Log+* uses handheld computers or PDAs (Personal Digital Assistants) for the Carers to record resident data, such as assessment needs, resident evaluations, care plan management, health and safety (Easylog, 2004).

*Mobile Nurse™* which also uses handheld computers technology, provides a computerised care plan facility, and it also contains extra features such as the automation of vital signs graphs, and if connected to the hospital information system (HIS), nurses would be able to retrieve doctor's orders and test results (PDA Cortex, 2004).

*Impetus Care Planner* is also another computerised care plan system that uses a care plan dictionary for reuse and also provides a facility for risk assessment, patient history, observations and Care plans due / or overdue for evaluation (Impetus Business Systems, 2004).

An alternative solution to provide a simple computerised care plan, would be to use basic software packages such as Microsoft office suite by customizing programs like MS Word and Access, and use a speech synthesiser as an input device, to reduce the strain of typing.

### **Barriers**

According to nurse executives, key barriers include cost, pushback from physicians and administration, a lack of willingness to set clinical transformation as a top priority, and a paucity of available tried and true products and implementation processes that are integrated, easy to install and easy to use (Sensmeier *et al*, 2002). With support to Sensmeier *et al* views, it is obvious that money would always be a decisive factor for any management in funding the development or purchase of a new system. If the long term benefits weighs more than the cost, perhaps it is advisable for any management to reconsider the aims and objectives of the organisation.

Other barriers include lack of standardization, multiple nursing terminologies, lack of a cohesive vision for nursing, reluctance to embrace technology, and few published success stories or sharing of best practices (Sensmeier *et al*, 2002). It is true to emphasize that the lack of success stories has not necessarily helped the awareness of benefits associated with the use of ICT, in the field of nursing.

## **Discussion**

Once implemented, the computerised care plan system like any other system, would need to be well maintained and optimized due to the increasing volume of data that it is likely to endure over the coming years. Let us also not forget that nurses, who will be the main users, would need training on how to interact with the system, this may take some time and may not necessarily be easy for some nurses from older generation, who may be techno phobic. But like in any organisation undergoing the integration of a new system, there would always be some workers who may find it difficult to adapt themselves to the change.

## **Conclusion**

It is fair to say that ICT should not be regarded as a saviour, but as an aid to an industry in need of restructuring its business processes to cut down on costs, time and increase efficiency. Yet what seems clear is that the need to move forward in a technologically driven era is almost inevitable, as success has already been proven in other industries.

By definition, hospitals, nursing homes, residential homes and other healthcare services are supposed to provide treatment and care to the frail and vulnerable, thus, if there are lapses and areas of improvements, it is recommendable that they are addressed.

## **Future work**

It is in my view imperative to conduct further research in others areas of nursing duties that could be best served with the assistance of ICT. I would not disregard an important aspect where improvement is certainly required, the hand over. The current hand over system is conducted in a face to face meeting style, where the nurse in charge from the outgoing shift hands over to the incoming staff for the next shift, by going through all the patients name and report the care given and any changes. It would be suggestive to design an automated system, that nurses could have access to, in order to find out such information and any other important news that might be worth disclosing to the incoming staff. The advantage is that nurses would be able to access the information as many times as they wish, perhaps to clear up any misunderstanding that they might have. This would certainly eradicate the time consumption of face to face style meeting hand over, and would clear delays and uncertainties that often arise in such meetings.

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