MEDINFO 2007
HISA Ltd Australia
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The Evaluation of Nursing Cart In Inpatient Medication and Documentations

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Abstract

In the hospital, there are many tools or technology to help the care givers to do their jobs. From the doctor writing orders, to the pharmacist to dispend the drugs, and the nurse give the medication to the patient. Many tools can help them to do these things correct and quickly. The CPOE (Computerized Physician Order Entry) can help the doctors descript the medication, to reduce the wrong spell or it can check the contraindication. The pharmacist can use the robots to fill the prescriptions. They double check the package, and sent the medication to the nurses. On the nursing side, however, they do not have a good tool to help them. Moreover, they need to do much duplicate paper work. It is hard to check the medication by a human brain, and complete the medication in the right time. We also consider the implementation of barcode medication in the feature. Therefore, we want to take a useful tool for nurse to complete their work effective and correct.

Keywords :

nursing cart, cost effective

Methods

In the previous study, we interviewed 98 nurses (about 51% fellows) for what kind of nursing cart they would like. More than 70% nurses accepted to take the mobile tools with the nursing cart together. So, we find out some solutions, such as, Tablet PC, Laptop, PDA, Panel PC and Desktop. With considering the battery life and the screen size, we eliminated the Desktop and the PDA. The Tablet PC, however, is too heavy for a female in Taiwan to take in hand for a long time. At last, we take laptop and panel PC for the final choice for nurses.

We built two kind of nursing cart. One is Panel PC (see Figure 1), and another one is laptop (see Figure 2). In order to make the laptop monitor become touchable. We added a touch screen kit in front of laptop screen.

We take these two nursing cart to the nursing station for 3 weeks. And ask the leader and fellows to use both carts. We designed the questionnaire based on the usability and feasibility. The final vision included 23 five-scale items.

Figure 1- The panel PC

Figure 2 - The laptop

In our information system, there are many buttons, check box, or radio buttons. So, the touchable screen is great useful. We designed an Excel VBA program to simulate our HIS, and asked users to finish one scenario. We supposed that if one take more time to finish a scenario, the tools would be useless. Besides, we also do the qualitative research. We asked them for the advantages, disadvantages and suggestion for both carts.

Results

Of all the 23 items, there are 9items meaning in statistics ($p<0.05$). Most of fellows thought the Panel PC would be more useful than laptop with touch screen. In the time test, the nurses spent more 44 seconds when they use laptop with touch screen averagely to finish a scenario.

The results of qualitative research showed that the work space for nurses was much bigger in the Panel PC. However, the laptop with touchable screen was light and handy.

Conclusion

The result showed that the nursing cart with Panel PC would be better option. But we still need to consider some factors, such as, the price, the maintain cost. In the feature, we want to improve the faults of both nursing carts. Besides, we will bundle the barcode medication and the NIS (Nurse Information System) together. Based on these changes, in the further research we hope we can find out the useful and effective nursing cart for the nurses to do their daily works. With these “smart” nursing carts, we will bring the care givers more time to take care of the patient and do the medication effectively and correctly.