Use Keywords to Search for Nursing Diagnoses on a Nursing Clinical Decision Support System

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Abstract—The purpose of this study is to establish keywords to search for nursing diagnoses on decision support system, and provide a convenient and efficient way to use simple keywords to search for care-related nursing clinical diagnoses. Given a set of keywords, our system can provide a relevant list of nursing diagnoses, remind related diagnoses, prompt clinical nurses of patient care, and improve patient care efficiency.

I. INTRODUCTION

Using keywords to find the support system of nursing diagnosis can not only reduce the time to assess patient care issues in the nursing staff, but also allows nurses to understand patients’ nursing health problems and increase diagnostic accuracy of care. The correctness of nursing diagnoses is related to the quality of patient care and hospital stay. The input of keywords collected in a nursing database contributes to the research development of future nursing diagnoses.

Arkinson & Murray (1990) demonstrated that the process of a nursing diagnosis is different from medical diagnosis, and it involves in the procedure that a nursing staff analyzes the data and discover the problem. Diagnostic assessment of nursing diagnosis accuracy is also important. Welton and Halloran (1999) analyzed nursing diagnoses and hospital days for each patient, and shown that ICU persistence number of days and total hospital costs are related. Therefore, improving the correctness of nursing diagnoses is the first step of clinical nursing care of patients.

II. METHOD

This study uses keywords to identify nursing diagnoses and collects them into a database. Understanding the effect of clinical uses of nursing staff contributes to the future development of the nursing process. Moreover, the integration of decision support systems of care measures, care plan clinical nurses better electronic tools so that patients get the human-centered nursing care.

Nursing diagnoses of many hospitals in Taiwan still apply the GOLDEN eleven nursing diagnoses, a functional health pattern-based decision support system. However, to deal with the complexity of future diseases, mental assessment of patients is necessary. This study incorporates on North American Nursing Diagnosis Association (NANDA) as the basis of database establishment. Our system enables clinical nursing staff to apply and store the data in the database. Clinical nurses can learn direction of nursing diagnoses and use satisfaction survey. Moreover, nurses can use keywords to search for nursing diagnoses on a clinical nursing decision support system.

We use Excel to construct NANDA-I knowledge base to store definition and classification of nursing diagnoses from 2009-2011. The keyword search engine is developed based on a spider method under Microsoft SQL Server database. The system retrieves relevant nursing diagnoses for clinical nurses to make decisions and for clinical nursing specialists to assist the validity analysis of nursing diagnoses.

III. RESULTS AND DISCUSSION

In recent years, clinical nurses have spent a large amount of efforts in writing record as operating routine. To enhance the efficiency for clinical nurses to provide good patient care, we develop this nursing diagnostic decision support system to help clinical nurses understand and remind nursing diagnosis of patients. Our experiment results demonstrate that using keywords to identify relevant nursing diagnoses can not only efficiently provide patient care, but also improve the accuracy of nursing clinical diagnoses. Compared with manual search on reference books, our system can provide a more efficient and accurate way for clinical staff to make nursing diagnoses. If the nursing diagnoses are accurate, we can also reduce patient hospitalization days, the ICU persistence, and the total amount of medical expenses.

Figure 1. Number of terms mapped to keywords for patient status.

REFERENCES
