# SUMMARY

The problem-oriented record system (PORS) provides an integrated nursing management technique for the implementation of the goal-directed patient care management concept. It is commonly known as the SOAP model: S-subjective data (what the patient says or complains of), 0-objective data (what the nurse observes in relation to the problem), A-assessment (nursing diagnosis), and P-planning (plan of nursing intervention). There are many advantages of using this model. It improves communication, is easy to retrieve to follow a patient's progress, facilitates monitoring by quality assurance, and reflects elements of the nursing process. The system is complete and fully effective only when all its components are used.

Effective application of PORS requires commitment to the underlying beliefs by all nurses who use it. It also depends upon the complete and accurate documentation of all components for each hospitalized patient from admission through discharge. Moreover, objective assessment of the application of PORS is of prime importance in identifying nurses educational needs, and determining areas of practice that need change or modification. Accordingly, innovative in-service education programs can be developed to improve the nurses' application of the PORS and hence, the quality of patient care.

This study has been conducted to evaluate the effect of introducing a SOAP problem-oriented record system on the quality of nursing documentation in general surgical and medical departments at Benha University Hospital; and preparing the staff to use it.

The program was developed with the assumption that the improvement of nurses knowledge, attitude and performance related to SOAP model will be associated with an improvement in the documentation of care and, in turn, the quality of patient nursing care.

To achieve the aim of the study, the first sample included all the staff nurses working in general surgical and medical departments (N = 77) in the pre-program, and immediately after the program. In the follow-up phase, only staff nurses working at that time (N=66) were approached. The second sample included 50 patients. These represented 10% of the total patients' body admitted to the above-mentioned departments. The third sample included 50 patients' records after discharge.

Data were collected through the use of the following tools before and after the program:

First tool: an attitude scale to assess nurses' attitude towards the value of documentation. It comprised 23 statements presented under three main broad categories: importance of documentation, rules and regulations of documentation, and readiness for change.

Second tool: knowledge test developed to test nurses' knowledge about nursing documentation. It contained 60 statements divided into five

categories: subjective data, objective data, assessment, planning, and rules and regulations of documentation.

Third tool: nursing audit developed to measure the quality of documentation. It comprised 109 items related to criteria to measure nursing records and recording, which were presented under six main broad categories: biographic data, subjective data, objective data assessment, planning, and rules and regulations of documentation.

Fourth tool: patient's satisfaction questionnaire developed to measure patient's satisfaction level as an indicator for predicting of the quality of patient care. It contained 45 statements related to patient's satisfaction about nursing care, which were divided into three main categories: assessment and planning, physical, and non-physical care.

The study proceeded through an assessment phase, planning phase, implementation phase, and evaluation phase. The assessment phase involved data collection pre-program, by using the developed tools: attitude scale, knowledge test, nursing audit, and patient's satisfaction questionnaire. The planning phase included two parts: the first part involved the development of a new nursing admission assessment sheet, problem list and initial nursing care plan, nurse's progress notes, and discharge summary. The currently used daily follow-up sheet was modified by using SOAP model. The second part included development of in-service education program objectives, contents, and instructional strategies. The implementation phase consisted of two parts. The first part involved program initiation for a period of two months. Each teaching session included 15-16 nurses, for a period of 5-7 days. Sessions duration ranged from 2.5 to 3 hours per day. In the second part,

the developed records were introduced to the nurses. The evaluation phase involved immediate and follow-up evaluation. Immediate evaluation comprised daily verbal feedback at the end of each session regarding the contents presented, instructional strategies, time allowed and level of understanding. Also, the attitude scale and knowledge tests were administered at the end of last session to test gain in knowledge and change in attitude towards nursing documentation. Review and discussion of the records were held at the end of the week for a period of two weeks on duty. Follow-up evaluation was started after three months of introducing the developed records by using the previously used tools. Data collected during the assessment and evaluation phases were analyzed and tabulated using appropriate statistical methods.

The following are the main study findings.

As regards knowledge, the in-service education program was effective in changing surgical and medical nurses' knowledge throughout the program, but it was still within average level. The change in nurses' knowledge was significant as regards to all main items of knowledge about nursing documentation in both departments. The highest level of knowledge change, in both was related to planning. However, there was a statistically significant difference between the two groups in the follow-up phase, with the surgical nurses having higher level of knowledge scores. In addition, the results showed that the increase in age was accompanied with a decrease in level of knowledge.

Concerning attitudes, the results indicated that there was a statistically significant change in surgical and medical nurses' attitude towards nursing documentation throughout the program. Both of them

showed slightly positive attitude towards documentation immediately after the program. In the follow-up, the surgical nurses' attitude remained similar, while the medical nurses' attitude decreased significantly relative to the immediate phase. Nevertheless, three months after the program the medical nurses were still "uncertain" of their attitudes, while the surgical nurses were "agreed" about their attitudes towards documentation.

The change in surgical nurses' attitude has statistically significantly improved as regards the importance of documentation and rules and regulations of documentation throughout the program. As regards medical nurses' attitude, it was significantly improved towards the importance of documentation in the immediate phase, but declined significantly in the follow-up. There was no significant difference between the two departments in relation to readiness for change.

It can be concluded that surgical nurses' attitude was improved in relation to the medical nurses' attitude in the follow-up after the program intervention. In addition, the increase in knowledge was associated with attitude improvement.

Regarding audit findings, there was a statistically significant improvement in documentation in surgical and medical departments' records after the program. However, the surgical department records improved more, in comparison to the medical department records, and the difference was statistically significant.

The results also showed that the overall audit in both departments was at "unsafe" level, before the program. After the program implementation, the surgical department moved to reach lower limit of

"incomplete" level, while the medical department moved to reach lower limit of "poor". This means that both of them are still below the acceptable level.

The change in quality of documentation was significant in regard to all main items of nursing documentation in both surgical and medical departments. The most prominent improvement in surgical department records was related to documentation of biographic data, while it was related to following rules and regulations of documentation in medical department records. As relates to SOAP items, the highest scores were related to "planning" pre- and post-program in both departments. The lowest scores were related to "subjective data" and "assessment" before the program in both departments, while it was related to "subjective data" after the program intervention.

The results also showed that there was a statistically significant difference between the pre- and post- evaluation of the program in relation to nursing admission sheet, nurses' progress notes, and discharge summary in both departments. The most remarkable improvement in surgical department nursing sheets was related to nursing admission sheet, while in medical department it was related to nurses' progress notes.

In post-program evaluation the most remarkable improvement in documentation in nursing sheet general items was related to following rules and regulations of documentation. In the specific items, it was related to documentation of biographic data on discharge summary in surgical department, while it was on nurses' progress notes in medical department after the program intervention.

Lastly, the results of patients' satisfaction illustrated that there was a statistically significant increase in both surgical and medical patients' satisfaction with nursing care after the program. The highest satisfaction level of surgical and medical patients was related to physical care in pre-program evaluation, while in post-program evaluation it was related to assessment and planning. However, there was a statistically significant difference between both of them after the program, the surgical patients being more satisfied than medical ones.

To conclude, the implemented in-service training program was successful in improving nurses' knowledge, attitudes, and documentation in records, as well as patients' satisfaction. However, although scores improved, they mostly did not attain acceptable levels. Surgical nurses had better retention of improvement in the late follow-up.

It is recommended that in-service education programs in nursing documentation be conducted on a continuous basis. It would also be helpful to establish a nursing audit committee responsible for quality assurance activities. Further studies need to be carried out before generalization could be made regarding applicability of SOAP model elsewhere.