Structured Diabetes Complication Screening (DMCS) Training Program for NLTH SOPC Nurses

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Introduction
Suboptimal diabetes control leads to various diabetes complications. The health costs on treating people with diabetes complications are much higher than those without complications. Nurse assessment on diabetes plays an important role on early detection of poor control diabetes and diabetes complications because nurses can refer diabetes patients for early and timely education and treatments in order to reduce diabetes complication development and deterioration. However, studies shown that the level of diabetes knowledge of nurse is insufficient. There is no exception in NLTH SOPC nurses. In order to support our NLTH SOPC nurses in developing their knowledge and skills in carrying out DMCS which is using worldwide to detect diabetes complications, a “Structured Diabetes Complication Screening Training Program” was designed to improve NLTH SOPC nurses’ competency and confidence in providing DMCS for diabetes patients at risk for relevant management effectively.

Objectives
To Enhance the Competency and Confidence of NLTH SOPC nurses in Diabetes Complication Screening

Methodology
Four NLTH SOPC nurses were empowered on 1) Diabetes Concept & Diabetes Diagnostic Criteria 2) Insulin & Regimens 3) Insulin Injection Technique Demonstration and Practice 4) Oral Antidiabetic Drugs (OAD) 5) Self-Monitoring of Blood Glucose (SMBG) Technique and Practice 6) Metabolic Risk Assessment Module 7) Diabetes Foot Care and Management through the program. Participants have to complete the same set of knowledge assessment form on pre- and post- basis: two questionnaires assessing 1) Nurse Perceived Role Competency on Diabetes Complication Screening 2) diabetes knowledge were designed; two checklists to assess participants’ diabetes core skills on 1) Insulin Injection Technique 2) SMBG Technique were also prepared. After the knowledge sharing, diabetes specialty nurse demonstrated hands on DMCS skills to each participant. Then each participant had to carry out 2 sessions of DMCS successfully in front of diabetes
specialty nurse before they worked independently.

**Result**
The “pre-test” and “post-test” mean score on “Insulin Injection Technique Checklist” were 72.2% and 93.1% respectively, the mean gain was 26.9%; the “pre-test” and “post-test” mean score on “Self-Monitoring of Blood Glucose (SMBG) Checklist” were 58.8% and 100% respectively, the mean gain was 41.2%. The results showed significant improvement on participants’ core diabetes self-management skills after the program.
The “pre-test” and “post-test” mean score of “Role Competence” were 53.1% and 80% respectively, the “Role Competence” gain was 26.9%. The “pre-test” and “post-test” mean score of “Knowledge Test” were 61.4 and 94.3% respectively, the “Knowledge Test” gain was 32.9%. The results showed participants had low diabetes knowledge scores and were lacked of confidence to perform DMCS for diabetes patients before the program. After the training program, their diabetes knowledge, competence and confidence to perform DMCS were improved significantly.