

Thesis Title Establishment and Evaluation of Centralized Parenteral Nutrition Admixing Service for Pediatric Patients at Pharmacy Department of Ramathibodi Hospital

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ABSTRACTS

Parenteral nutrition usually require admixing before they are administered to patients. The admixing needs proper operation including ordering, handling and mixing so that the sterile, pyrogen-free and particle-free solution is obtained. At Ramathibodi Hospital, PN is increasingly used and decided to be prepared by pharmacists. The study was designed to assist pharmacists in the set up and the running of a parenteral nutrition admixing center.

Validation of laminar air flow hood for its sterile area was performed by the settling-plate method using blood agar as culture media. The test was repeated 5 times, one week apart, until the results were negative for microorganisms. The parenteral nutrition admixing center eventually started the service on 5th September 1994. From then till 5th December

1995, there were 383 bottles of parenteral nutrition prepared from the center. Every bottle were tested for sterility and the results showed no microorganism. During these 92 days the laminar air flow hood was checked twice, 1 month apart, for sterile and found no contamination from microorganisms.

The cost of all parenteral nutrition prepared from the center during the study were calculated and limited to the cost of materials needed in the admixing. 116,458 bahts or 407.20 bahts/bottle was found to be the cost and could be considered as the investment. The 3.64% cost saving was demonstrated when the cost of parenteral nutrition prepared from either the center or nursing unit were compared (407.20 bahts/bottle VS 422.60 bahts/bottle, parenteral nutrition admixing center VS nursing unit). The 16.55% profit was revealed as well (465.51 bahts/bottle VS 542.55 bahts/bottle, cost of materials used in the admixing VS charge per invoice).

In addition, PN order form #1, PN order form #2, PN preparation form, label, invoice and list of nutrients and supplies were designed in the legible form to be an efficacious tool for physicians and pharmacists to perform their task for PN patients.

The parenteral nutrition admixing center was therefore proved to be worthy in setting up and delivery a good quality of parenteral nutrition to be administered to patients.