CHAPTER I

INTRODUCTION

Effective control programmes in health care facilities are essential elements for reduction in nosocomial infection rates. This has been recommended by the Centers for Disease Control (CDC) in United States of America as a result of the Study of Efficacy of Nosocomial infection and Control programmes (SENIC) conducted in 1974. The study revealed the essential components of effective programmes which were organized surveillance, control activities, infection control physician, infection control nurse per 250 beds and a system for reporting infection rates to concerned personnel (Haley, et al. 1985).

Nosocomial infection is associated with several factors such as patients themselves, the health care equipment and the environment (Soule, 1983; Ayliffe and Taylor, 1984). Furthermore, the other important factor that contributes to the infection is the health care personnels. Their practice of infection control behaviors affects patient risk of getting nosocomial infections. Steps taken to reduce nosocomial infection and improve quality of care of personnel, or to modify the infection control practices of health care personnels are necessary. The infection control practices need to be evaluated and monitored in order to maintain a certain standard of care and

ensure safety for patients. Guidelines for infection control are considered helpful (Bureau of Infection Control and Health Services Directorate, 1985).

The control guidelines Category I established by the Centers for Disease Control (CDC) have been strongly recommended for adoption because they were strongly supported by well designed and controlled clinical studies (Bureau of Infection Control and Health Services Directorate, 1985). These guidelines have been shown to be efficacious in reducing the risk of nosocomial infection and were viewed as useful by the majority of experts in the field of infection control. The measures in category I were judged to be applicable to the majority of hospitals regardless of size, patient population, or endemic nosocomial infection rates and have been considered practical to implement.(Bureau of Infection Control and Health Services Directorate, 1985).

Chiangmai University Hospital is a teaching hospital belonging to the Faculty of Medicine, Chiangmai University. It is a facility of 1100 beds. Nosocomial infection is one of the burden problems like other hospitals. The first study on nosocomial infection rates in this hospital was conducted by Srisupan V. et.al. in 1987. The study showed the overall infection rate of 9.3% and the common sites were urinary tract infection, respiratory infection, bacteremia, surgical wound infection and gastrointestinal tract infection respectively (Srisupan, Senarat, Pichiansathien, and Tongsawat, 1988). In the same year, the hospital established an infection control committee and employed three full-time infection control nurses

to take on the responsibility of controlling the hospital-acquired infections. So far, the hospital has set the policy, objectives, infection control committee and the surveillance system for control of nosocomial infection in the hospital. The infection control committee composes of the hospital administrator, physicians from every department, a microbiologist, the nursing director and infection control nurses. Nosocomial infection surveillance has been done by the infection control nurses and the infection rates have been reported to the committee and related health personnel. Active control measures in the hospital have not yet been introduced systematically. The nosocomial infection rates are not yet reduced to a satisfactory level. Therefore active control activities for reducing nosocomial infections are needed. The CDC control guidelines for health personnels to practise are considered to be suitable for assisting health personnel to refresh their control behaviors of routine performance and to maintain a high quality of care given to patients. Before implementing the guidelines on such a large-scale, it is necessary to find out the effectiveness of application of the guidelines in the actual situation of routine service of this hospital. A study of this application a priori from a small-scale to find out whether it works or fits with our situation will help the decision makers design further steps and prevent the failure of technology utilization.

This study deals with the control of nosocomial urinary tract infection. The CDC control guidelines for this infection

(In Category I) will be introduced to nursing personnels. This site of infection is selected as the first priority for control because in this hospital, like in others, the burden of nosocomial urinary tract infection is highest (Srisupan, Senarat, Pichiansathien, and Tongsawat, 1988).

Primary Research Question

Does the application of the control guidelines for urinary tract infection and education to nursing personnels reduce the infection rate of fifty percent among catheterized patients compared with the rate by the application of the control guidelines alone?

Secondary Research Questions

1. What is the degree of adherance to practice according to the nosocomial urinary tract infection control measures category I of the CDC among ward personnel prior to the introduction of guidelines?

2. Does the adherance to practice according to nosocomial urinary tract infection control measures category I of the CDC change after introducing the control guidelines and education?

Objectives

1. To study the effectiveness of the guidelines application and education to the routine service. 2. To compare the control behaviors of personnel in actual routine service with the recommended control measures (category I) recommended by the Centers for Disease Control.

3. To measure the sustained effect on behavioral change after withdrawal of the intervention programme.