



**Service Priorities and Programmes**  
**Electronic Presentations**

**Convention ID:** 1281

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**Prevention of Catheter-related Blood Stream Infection (CRBSI) in Pediatric Patients**

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**Keywords:**

Prevention

Central Venous Catheter

Infection

Paediatric patient

**Introduction**

Central venous catheters (CVC) are commonly used in the High Dependency Unit in the Department of Paediatric Cardiology for infusion and drug administration, as well as for nutritional and hemodynamic monitoring. The inappropriate use of CVC can lead to CRBSI which can prolong the length of stay and increase hospital costs. Nurses play important roles in the maintenance and surveillance of CVC and the control of infections. Although the Centers for Disease Control and Prevention (CDC) have published guidelines for the use of CVC, it is unknown how these are practiced in the clinical settings. Nurses' lack of knowledge may be a barrier to adherence to guidelines for preventing CRBSI. Hence, it is important to educating nurses the essential elements in maintenance of CVC.

**Objectives**

To describe the major elements in CVC's maintenance for the prevention of CRBSI

To reinforce the importance of CVC care

To enrich nurses' knowledge and skills in changing CVC exit site dressing

**Methodology**

A comprehensive booklet containing the information about CVC's maintenance and outline the procedure of changing the CVC exit site dressing was produced. 10 nurses with two to ten years' experience were invited to participate in the program. It was carried out in the Department of Paediatric Cardiology, Queen Mary Hospital between August 2017 and September 2017.

The program included:

- A half hour briefing session was conducted to the nursing staff about the prevention of CRBSI using the booklet.
- A 16-item questionnaire is designed to assess nurses' knowledge in prevention of CVC infection.
- Pre- and post-test were used to assess nurses' knowledge in prevention of CVC.

- An evaluation form was completed by each participant to assess the usefulness of the booklet.

### **Result**

Results:

The average score of the pre-program assessment was around 73% and then was greatly increased to 97.5% after the program. 100% participants stated that the booklet could raise their awareness in CVC's maintenance and increase their knowledge in caring the CVC. They all agreed that the booklet is informative and useful.

Conclusion:

The booklet has been shown to be useful to raise nurses' awareness in CVCs maintenance and increase their knowledge in caring the CVC. It is recommended to design Central Venous Catheter Maintenance checklist to ensure the nurses compliance with frequency of dressing change and proper hand hygiene.

Acknowledgement:

I deeply thank the CQI facilitator Ms. Li and other team members to have contribution in this project,