of 2011, and CRBSI go up to 2.5% in 2012 from the 1.8% of 2011. Accordingly, a CVC (Central Venous Catheter) Bundle Care was activated in the Intensive Care Unit, hoping to improve its CRBSI and offer better medical care.

**Materials and methods:** With its activation in the February of 2013, the CVC Bundle Care was teamed up by the director and doctors of ICU, there came with related advocacy in department meetings and nursing morning meetings. Moreover, we also held related training, set up checklists and SOPs for CVC insertion and routine care, in order to filter carefully the indications of patients’ use of CVC, calling doctors’ attention for early removal. With reference to Major Elements, when operating CVC puncture, the maximal barrier precaution, the use of dry hand brush soap for hand sterilization, using maximal sterile draping, 2% Chlorhexidine skin sterilizing and the choice of injection position, etc. The Infection Control Group each unit got related data and statistics as feedback.

**Result and discussion:** Since the implementation of CVC Bundle Care in the February of 2013, the CRBSI infection from the 2.5% in 2012 to the 2.2% in 2013. Research reveals that the aseptic technique, aseptic care, and standard operation procedure, etc. has positive correlation with blood infection. Our hospital has improved the CRBSI in the Intensive Care Unit, and offers better quality medical care for patients.

### PS 1-056

**REDUCING BLOOD CULTURE CONTAMINATION IN THE EMERGENCY DEPARTMENT EFFECTS BY ALCOHOLIC CHLORHEXIDINE AS ANTI-SEPTIC AGENTS**

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**Purposes:** Proposing to use the optimal antiseptics with adequate drying time as skin preparations to decrease the burden of blood culture contamination in the emergency department is common. However, other clinical characteristics and conditions might also have the effects on the blood culture contamination.

**Methods:** An intervention cross-sectional study was conducted in an ED with approximately 86,000 annual census hospital during August 2011 to December 2012. Patients were randomly selected to receive one of the three different anti-septic agents prior to invasive procedures: 0.5% alcoholic chlorhexidine, 2% alcoholic chlorhexidine, or 10% povidone in 95% alcohol, followed with 75% alcohol. Clinical characteristics for blood culture contamination.

**Results:** A total of 57,898 eligible ED patients were enrolled. Old age, end stage of renal disease (ESRD) patients, severe triage, and malignancy were more likely to have blood culture contamination in the ED. Patients treated with 2% alcoholic chlorhexidine group may not significant improve blood culture contamination in the ED but has the lowest contamination rate.

**Conclusions:** Applying 2% alcoholic chlorhexidine as anti-septic might minimize the skin commensals was suitable for the high patient census EDs to improve the care quality. However, other underlying conditions might still be associated with blood contamination in the ED.

### PS 1-057

**EFFICACY OF INCREASING CARRYING RATE OF PORTABLE HAND SANITIZER AMONG HEALTHCARE PROFESSIONALS AT A PSYCHIATRY HOSPITAL**

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**Purpose:** During the "Hand Hygiene Certification Program" promotion period, the carrying rate could reach 100%. In 2012, the carrying rate dropped to 74.4%. The reason shows them place hand sanitizers in their lockers or drawers instead of carrying them at all times. It is indeed required to improve the portable hand sanitizer carrying rate in order to precisely enforce hand hygiene and prevent infectious disease.

**Methods:**

1. **Hardware**
   - Addition of public portable hand sanitizers: On the desktop of the nursing station in each patient ward.
   - Educational slogans: Slogans posted on the public portable hand sanitizers box.
   - Reminders in the information system and guidance sent through email: Employees see the reminder as soon as they log into the computer.

2. **Software**
   - In-service education courses on a yearly basis.
   - Declaration activities: I will carry hand sanitizers.
   - Quiz games: Employees fun quiz and gift prizes
   - Continuous internal audits on a monthly basis.

**Results:** The campaign successfully increased the carrying rate of hand sanitizers among healthcare professionals from 74.4% in 2012 to 93.42% in 2013 (by 19.02%). The infection density also dropped from 0.62‰ in 2012 to 0.47‰ in 2013 (by 0.15‰).

**Conclusions:** With interventions on multiple facets, that is, through hardware and software, it can indeed help enforce hand hygiene to precisely prevent against the incidence of nosocomial infectious disease.