and mortality and it prolongs hospitalization days to 5~20 days. It is very important to implement CVC bundle care to reduce CLABSI.

**Methods**: We joined CVC Bundle Care Project of Centers for Disease Control from 2013 to 2014. We established CVC bundle checklist by evidence-based database. The five methods are: 1. hand hygiene, 2. maximal sterile barrier, 3. use of 2% Chlorhexidine, 4. use of Tegaderm patch, 5. daily evaluation and record by camera and computer. We also implement the correction for symbols and mascot, objective structured clinical examination (OSCE) in doctors, CVC bundle education, technical observation in medical centers, computerized our checklist, post our symbols.

**Results**: By implementing these methods for 1 year and 10 months, our rate of CLABSI decreased from 4.56/10,000 to 1.68/10,000. The utility rate of CVC decreased 56.7% to 51.2%. There are 13 months free of CLABSI from Jan. 2013 to Sep 2014.

**Conclusion**: The difficulties are: 1. the co ignition and behavior change, especially in adding assistants and needed to wear cap, isolation dress, and the use of maximal sterile barrier. 2. daily evaluation. We hold many activities and education to make CVC bundle care as internalization, and use digital camera to store the pictures of daily care. After our efforts, the rate of CLABSI and the medical costs both decreased. The safety of our patients got promoted and approached our goal of “Zero Tolerance” in CLABSI.

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**PS 1-203**

MULTI-PRONG PROGRAM IN REDUCTION OF HEALTHCARE-ASSOCIATED METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS BACTEREMIA IN SGH

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**Purpose**: To evaluate the effectiveness of a multi-prong program to reduce MRSA bacteraemia in an Active Tertiary Hospital.

**Methods**: A multi-prong program was introduced in the hospital which included an enhanced hand hygiene program, pre-operative baths, isolation precautions included for all tagged cases, improved environmental hygiene, electronic tagging and un-tagging system, and active MRSA surveillance for all patients upon admission. The rate of healthcare-associated MRSA bacteraemia was then used as an indicator as a monthly feedback for all patients upon admission. The rate of CLABSI decreased from 3.5 to 1.2 per 10,000 patient-days before intervention.

**Results**: By implementing these methods for 1 year and 10 months, our rate of CLABSI decreased from 4.56/10,000 to 1.68/10,000. The utility rate of CVC decreased 56.7% to 51.2%. There are 13 months free of CLABSI from Jan. 2013 to Sep 2014.

**Conclusion**: The difficulties are: 1. the co ignition and behavior change, especially in adding assistants and needed to wear cap, isolation dress, and the use of maximal sterile barrier. 2. daily evaluation. We hold many activities and education to make CVC bundle care as internalization, and use digital camera to store the pictures of daily care. After our efforts, the rate of CLABSI and the medical costs both decreased. The safety of our patients got promoted and approached our goal of “Zero Tolerance” in CLABSI.

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**PS 1-207**

THE REDUCTION OF CATHETER-RELATED BLOODSTREAM INFECTIONS IN MICU BY BUNDLE CARE

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**Purpose**: Most ICU patients to be placed due to treatment-related invasive ductal. Hospital ICU medical care related infection rate was 4.2 times the general ward (2010-2013 average). MICU bloodstream infection rate was 3.1 times the general ward (2010-2013 average). Bloodstream infections always lead to severe infections, high mortality and prolonged hospital stay. High Court bloodstream infections again MICU unit occupies first place, so the devaluation of its main implementing units.

**Methods**: In June 2012, we are implementing a CVC care bundle that includes hand hygiene, maximal barrier during insertion, chlorhexidine skin antiseptic, optimal catheter site selection that avoids the femoral site, a bundle checklist during catheterization, daily line care, and removal of the line when it is no longer needed.

**Results**: Since January 2012 to June, bloodstream infections rate of MICU was 7.95/10,000. After a series of interventions, June to December of bloodstream infections rate was 1.23/10,000. Statistics by the Fisher Exact Test statistically significant p <0.005.

**Conclusions**: The CRBSIs could be further prevented by CVC bundle intervention. Continuous monitoring can shorten the implantation duration of CVC thus decrease the rate of CRBSIs.

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**PS 1-205**

MOLECULAR EPIDEMIOLOGY OF THIRD GENERATION CEPHALOSPORIN-RESISTANT ESCHERICHIA COLI OF PATIENTS WHO STAYED IN RESPIRATORY CARE WARDS IN MIDDLE TAIWAN

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**Purpose**: Escherichia coli is the common pathogen in respiratory care ward (RCW) patients. This study was conducted to investigate the genotyping and prevalence of antimicrobial resistance genes in third generation cephalosporin-resistant (TGCR) E. coli isolates obtained from RCW patients.

**Methods**: TGCR blood E. coli isolates obtained from RCW patients of three regional hospitals were collected during 2012. Genes of plasmid-mediated extended-spectrum and AmpC beta-lactamases, and quinolone resistance (qnr, qepA, and aac(6’)-Ib) were detected by PCR method and sequencing. Pulsed-field gel electrophoresis (PFGE) and multilocus sequence typing (MLST) were applied for genotyping.

**Results**: A total of 58 TGCR blood E. coli isolates were collected. Nineteen isolates, 14 isolates, and 25 isolates were obtained from A, B, and C hospital, respectively. PFGE patterns analysis revealed 52 pulotypes and were grouped into 35 clusters or unique strains. Only cluster T and AE had more than 5 isolates. MLST analysis revealed 16 sequence types and predominant types were ST131 (n = 20) and ST68 (n = 17). blaCTX-M-3, blaCTX-M-14, blaCTX-M-15, blaCMY-2, and aac(6’)-Ib were detected in 3, 29, 3, 37, and 13 isolates, respectively. Between isolates of ST131 and ST68, there were no significant differences in distribution among the three hospitals, carriage of antimicrobial resistance genes except ST68 isolates had a higher prevalence of both blaCTX-M-14 and blaCMY-2 (p < 0.05).

**Conclusions**: Not only ST131 but also ST68 of TGCR E. coli were spreading in RCW patients in middle Taiwan. blaCTX-M-14 and blaCMY-2 were the most common 2 encoding genes of third generation cephalosporin resistance in E. coli.

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**PS 1-201**

BACTEREMIA CAUSED BY CONTAMINATED INTRAVENOUS DRIP DRUG

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**Purpose**: Serratia marcescens is a species of rod-shaped Gram-negative bacteria, which is abundant in presence in the environment and involved in hospital-acquired infections (HAIs), particularly catheter-associated bacteremia, urinary tract infections and wound infections and is responsible for 1.4% of HAI cases in the United States. Infection control practitioner detected two nosocomial bloodstream infection cases in a Neurosurgical Ward. Both patients developed symptoms of fever, chills and tachycardia when injected with Mannitol.

**Methods**: Site investigations found an inappropriate heating process instantly. Meanwhile the blood specimen and the intravenous drug within the infusion control set. Mannitol is an osmotic diuretic, which is used ining or injection process. Mannitol is an osmotic diuretic, which is used inversation cases in a Neurosurgical Ward. Both patients developed symptoms of fever, chills and tachycardia when injected with Mannitol.

**Conclusion**: Site investigations found an inappropriate heating process instantly. Meanwhile the blood specimen and the intravenous drug within the infusion control set. Mannitol is an osmotic diuretic, which is used ining or injection process. Mannitol is an osmotic diuretic, which is used in