

prevalence of MDRO positive cultures decreased to 9.5% (91/954), 4.7% (31/660), and 2.8% (30/1068). Compared to period 1, the mean percentages of MDRO positive cultures from high-touch surfaces was reduced by 41.0% ($P < 0.01$), 70.8% ($P < 0.01$) and 82.6% ($P < 0.01$) in period 2, 3, and 4, respectively. Relative to period 3, wiping each cleaning unit with 3 cloths resulted in a statistically significant 40.4% ($P = 0.039$) decrease in the prevalence of MDRO positive cultures and contributed to 22.3% ($P = 0.013$) increase in the rate of fluorescent marker removal and 21.6% ($P = 0.015$) increase in the ATP bioluminescence value which is above 250.

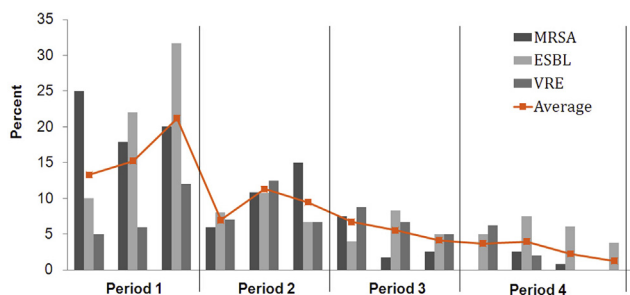


Figure Impact of sequential enhanced cleaning and disinfection measures on removing MDRO of high-touch surfaces in MICU

2.1 ‰ ~ 8.8 ‰ in 2012 and infection rate increase to 9.6 ‰ in 2013 February. Therefore, it is desirable to improve the rate of infection through the bloodstream inside the unit model of care to maintain the patient's health, and provide high quality of cancer care.

Methods: The unit began in 2013 March with the hospital infection control center for the promotion of the flat central venous catheter care of the plan to promote the combined cancer care team planning content for (a) promote the concept of team members (b) implementation of the "CVC day care evaluation form"(c) the development of artificial blood vessels care nursing car (d) development of artificial blood vessels care packages.

Results: In cooperation with the cancer team, after co-promote the six-month period were bloodstream infections valuation center inside the unit caused by the catheter, tracking the period from March 2013 to June 2014, the average of the monthly rate of infection by 13.2 ‰ to 1.6 ‰ (Figure 1 and Table 1).

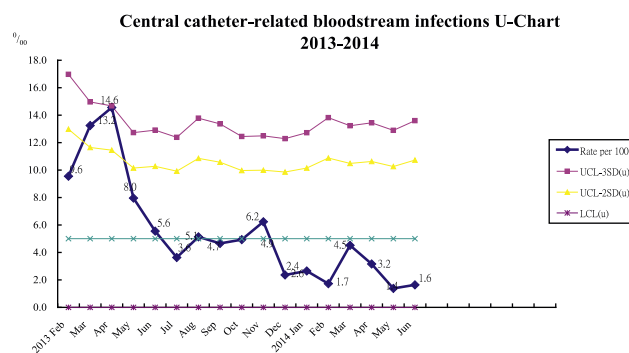


Figure 1 U-Chart 2013-2014

Table 1 Central venous catheter-related bloodstream infections Statistics (OS 2-7)

	2013 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2014 Jan	Feb	Mar	Apr	May	Jun
CLABSI	3	6	7	6	4	3	3	3	4	5	2	2	1	3	2	1	1
Central line day	314	453	481	754	720	826	584	644	811	802	847	755	579	664	632	723	609
Rate per 1000	9.6	13.2	14.6	8.0	5.6	3.6	5.1	4.7	4.9	6.2	2.4	2.6	1.7	4.5	3.2	1.4	1.6

Conclusions: Enhanced Cleaning and disinfection measures that included using fluorescent markers and ATP bioluminescence as a quick feedback tool, as well as wiping 1 cleaning unit with 3 cloths daily achieved removing MDRO on high-touch surfaces. Compared to 1 cloth, using 3 cloths for 1 cleaning unit was more effective to ensure cleaning of the environment in MICU.

OS 2-7

USING CVC BUNDLE CARE MODEL TO IMPROVE THE EFFECTIVENESS OF THE IMPLEMENTATION OF BLOODSTREAM INFECTION IN CANCER WARD

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Purpose: The unit for cancer wards, occupancy are all adults undergoing cancer treatment-related patient, about 95% of patients during therapy during hospitalization with Port-A and central venous catheter (CVC) for drug treatment. Bloodstream infections caused by central catheter is the first incidence of infection rate. Statistics show bloodstream infection rate was

Conclusions: The use of CVC Bundle Care Model concept, from placing the pipeline to follow the medical care team must use care in order to effectively improve persistent infection problem.

OS 2-8

APPLICATION OF BUNDLE INTERVENTION IN REDUCING CENTRAL VENOUS CATHETER-RELATED BLOODSTREAM INFECTIONS

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Purpose: To identify the incidence rate of central venous catheter-related bloodstream infections (CRBSI) and the effect of bundle intervention in reducing CRBSI.

Methods: Retrospective and Prospective study were both used to analyze the incidence rate of CRBSI in bundle intervention.

Results: In bundle intervention period, the incidence rate of CRBSI was reduced by 54.3% (from 7.58 to 2.15, $P < 0.05$), the incidence time of CRBSI was delayed ($t = 16.989$, $P < 0.05$), and the hospitalization time was distinctly shorten in bundle intervention group ($t = 4.058$, $p < 0.05$), while

the incidence rate of subclavian catheter increased from 48.48% to 48.48% ($P < 0.05$).

Conclusions: The incidence rate of CRBSI could be reduced via bundle intervention, which suggested that training, the largest sterile barrier, hand hygiene, disinfecting skin with 2% chlorhexidine, early extubation and chlorhexidine bathing can effectively prevent the incidence of CRBSI.

OS 2-9

DECREASE MDRO BY TEAM-WORK MODEL BUNDLE CARE

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Purpose: In our hospital, MDROs account for 30.1% of health-care associated infection in 2012 and 2013. It also accounts for 12.2% of all bacteria isolated during August 2013 and January 2014. We have participated in Antibiotics Stewardship program (ASP) program since 2014.

We expect to reach the goals by team work bundle care in the future.

1. Hand hygiene compliance 85% and accuracy 75% (Average compliance 84.2% and accuracy 71.2% of 323 hospitals in 2010 and 2011).
2. Health associated infection density below 1.5‰ (Reference: Taiwan health care quality index average 1.88‰ in 2013).
3. Resistant strains less than 10% bacteria isolated, health care related resistant strains less than 20%.

Methods:

1. Antibiotics stewardship program (ASP) setup.
2. Establish antibiotics use standard.
3. Computer information systems for antibiotics management.
4. Education: We hold education programs for health care related membranes.
5. To make a standard of environmental cleaning and monitor system.
6. Monitor and isolation system of MDROs.

Results:

1. Hand hygiene compliance was increased to 70-87%, and accuracy was increased to 72-92% during January and August, 2014.
2. The health care-associated infection density average is 1.46‰ in the 6 months before ASP. It decreased to 1.30‰ in the 6 months after ASP. The results showed improvement and also reach our goal of less than 1.5‰.
3. Rates of hospital MDROs decreased from 12.23% (half year before ASP) to 10.91% (half year after ASP), which decreased 10%.

Conclusions: Active isolation for patients indicated not only can prevent pathogens spreading, but also increase the quality of environmental safety. For those transfer to long-term care facilities, isolation information from hospital can decrease the chance of MDROs spreading. Managers' support and team-work efforts, as well as infection control methods, are very important to decrease MDROs. We will try our best to create a safer environment for patients.

OS 3-1

AN EFFECTIVENESS OF HIV/AIDS PREVENTION MODEL IN AKHA YOUTHS, THAILAND

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Purpose: This project aimed to develop the effective preventive model for HIV/AIDS among the youths of Akha hill tribe people in northern Thailand.

Method: This operational research was conducted and divided into two phases: the first phase aimed to determine the risk behaviors used a cross-sectional study design, following by the community participatory research design to develop the HIV/AIDS preventive model among the Akha youths. The instruments were composed of completed questionnaires and

assessment forms that were tested for validity and reliability before use. Study setting was Jor Pa Ka and Saen Suk Akha villages, Mae Chan District, Chiang Rai, Thailand. Study sample were the Akha youths lived in the villages. Means and Chi-square test were used for the statistical testing.

Results: Akha youths in the population mobilization villages live in agricultural families with low income and circumstance of narcotic drugs. The average age was 16 (50.00%), 51.52% Christ, 48.80% completed secondary school, 43.94% had annual family income 30,000–40,000 baht. Among males, 54.54% drank, 39.39% smoked, 7.57% used amphetamine, first sexual intercourse reported at 14 years old, 50.00% had 2–5 partners, 62.50% unprotected sex (no-condom). Reasons of unprotected sex included not being able to find condom, unawareness of need to use condoms, and dislike. 28.79% never been received STI related information, 6.06% had STI. Among females, 15.15% drank, 28.79% had sexual intercourse and had first sexual intercourse less than 15 year old. 40.00% unprotected sex (no-condom), 10.61% never been received STI related information, and 4.54% had STI. The HIV/AIDS preventive model contained two components. Peer groups among the youths were built around interests in sports. Improving knowledge would empower their capability and lead to choices that would result in HIV/AIDS prevention. The empowering model consisted of 4 courses a. Human reproductive system and its hygiene, b. Risk-avoid skills, family planning, and counseling techniques, c. HIV/AIDS and other STIs, d. Drugs and related laws and regulations. The results of the activities found that youths had a greater of knowledge and attitude levels for HIV/AIDS prevention with statistical significance (Chi square $\chi^2 = 12.87$, p -value = 0.032 and Chi-square $\chi^2 = 9.31$, p -value < 0.001 respectively).

Conclusions: A continuous and initiative youths capability development program is the appropriate process to reduce the spread of HIV/AIDS in youths, particularly in the population who have the specific of language and culture.

OS 3-2

EFFECTIVENESS OF A REDUCED DOSE OF EFAVIRENZ PLUS 2 NRTIS AS MAINTENANCE ANTIRETROVIRAL THERAPY WITH THE GUIDANCE OF THERAPEUTIC DRUG MONITORING

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Purpose: A substantial proportion of HIV-infected patients may have unnecessarily higher plasma efavirenz (EFV) concentrations than recommended while receiving EFV-containing combination antiretroviral therapy (cART) at the currently recommended daily dose of 600 mg. A lower daily dose (400 mg) of EFV has recently been demonstrated to be as efficacious as the recommended 600 mg when combined with tenofovir/emtricitabine in a multinational clinical trial. We aimed to use a therapeutic drug monitoring (TDM)-guided strategy to optimize the EFV dose in HIV-infected Taiwanese patients.

Materials and Methods: The plasma EFV concentrations at 12 hours (C12) after taking the previous dose were determined in HIV-infected adults who had received EFV-containing cART with viral suppression for 6 months or longer (plasma HIV RNA load [PVL] < 200 copies/mL). For those with EFV C12 > 2.0 mg/L, EFV was reduced to half a tablet daily. Determinations of EFV C12 were repeated 4 to 12 weeks after switch using high-performance liquid chromatography. CYP2B6 G516T polymorphisms were determined using polymerase-chain-reaction restriction fragment-length polymorphism.

Results: Between April 2013 and November 2014, 159 patients (94.3% male; mean age, 39 years; 98.7% with PVL < 50 copies/ml; 25.8% HBsAg-positive and 6.0% anti-HCV-positive) were switched to a reduced dose (1/2# hs) of EFV; and 42.3% of them had CYP2B6 G516T or TT genotypes. The mean baseline EFV C12 before switch was 3.43 mg/L (IQR, 2.48-3.99), which decreased to 1.74 mg/L (IQR, 1.34-2.09) who had completed follow-up of C12 EFV 4 weeks after switch, with a reduction of 47.0% (IQR, 38.3-55.1%). As of 30 Nov, 2014, 97.4% of the 151 patients who had completed the first follow-up of PVL and 98.9% of the 95 patients who had completed the second follow-up achieved undetectable PVL (< 50 copies/ml) following switch to a reduced dose of EFV. The mean CD4 count increased from 578 before switch to 618 cells/mm³ at week 24 while the lipids did not change significantly after switch. More than 80% of the patients reported improvement of the symptoms related to use of full-dose EFV.