Results: For part 1, both HARDY and CHROMagar were 100% sensitive and 100% specific for the 59 strains tested. For part 2: Out of the 40 specimens, 6 MDRA were detected: 4 by all the agars, 1 picked up by Hardy alone (non-MDRA *acinetobacter* by the others), 1 picked by both CHROMagar and Hardy (non-MDRA *acinetobacter* by m-LAM). Upon re-examination, multiple colonies with different susceptibility profile were found on the agars. Discrepancy was likely due to chance of picking the resistant colonies. For the 34 non-MDRA specimens, follow up tests were required in 6 when using m-LAM, 13 when using Hardy, and 5 when using CHROMagar.

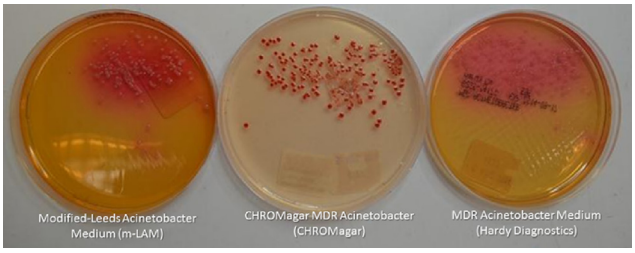

Figure. Appearances of MDRA in the three tested MDRA selective agars.

Conclusions: The three tested selective agar media have good sensitivity and specificity for detecting MDRA. Each has its own advantage and disadvantage and the choice should be made by individual laboratories.

PS 2-327

EPIDEMIOLOGY OF CANDIDEMIA IN A MEDICAL CENTER IN MIDDLE TAIWAN

Hui-Lan Chang [a], Li-Jhen Lin [a], Ing-Moi Hii [b], Chun-Eng Liu [a,b]. [a]*Infection Control Committee, Changhua Christian Hospital, Changhua, Taiwan;* [b]*Department of Internal Medicine, Changhua Christian Hospital, Changhua, Taiwan*

Purpose: Opportunistic pathogens such as yeast infections caused by Candida bacteremia (Candidemia),Clinical morbidity and mortality is still an important reason.This experiment was collected from 2009 to 2012 in Taiwan Medical Center clinical laboratory data were retrospective study of patients with candidemia.
Methods: To test the disk colorimetric microdilution,Configure the appropriate dilution test disc antibiotics and coloring indicator,After the addition of non-critical liquid yeast culture,In manual interpretation manner lowest antifungal concentration observed inhibition of microbial growth, fungal drug susceptibility testing operation,Understanding of the distribution and drug susceptibility against fungal change clinical pathogenic yeast.
Results
Candida albicans accounted for 45.2%, *Candida tropicalis* 22.3%, *Candida glabrata* 21.8%, *Candida parapsilosis* 8.5%, *Candida krusei* 1.1% and 1% other.Gender distinction, men 63.3%, women 36.7%.To distinguish between age 0 to 20 years old 4.3%, 5.9% from 21 to 40 years old, 41 to 60 years 19.7% 47.9% 61 to 80 years, 22.3 percent of 81 to 100 years old.In 2009 and 2012 isolates, a total of 188 cases of patients with candidemia in this study.
Conclusions: The experiments showed that the most frequently isolated remains *C.albicans*,Others in sequence for *C.tropicalis*, *C.glabrata*, *C.parapsilosis* and *C.krusei* ... etc.Amphotericin B, Posaconazole drug susceptibility testing,CLSI M27-S3 No interpretation no breakpoint therefore to represent. Anidulafungin, Micafungin this experiment *Candida spp*.Are all Susceptible.*C.glabrata*, *C.tropicalis* drugs Susceptible lower. Necessary with focus on prompt identification of patients at risk for candidemia due to resistant strains and the effect of appropriate antifungal therapy on mortality.

PS 2-328

THE MANAGERIAL EXPERIENCE OF REUSE OF SINGLE-USE MEDICAL DEVICES

Li-Jhen Lin [a], Hui-Lan Chang [a], Chun-Eng Liu [a,b]. [a]*Infection control Committee, Changhua Christian Hospital, Taiwan;* [b]*Information Technology Department, Changhua Christian Hospital, Taiwan*

Purpose: To develop audit procedure and administration policy for reuse of single-use medical devices so that the introduction of these devices into clinical practices can be regulated to prevent increasing risk of infection due to inappropriate reuse of these devices on patients.
Material and methodology:

1. Resource management department receives the application from the "team for incoming new medical materials" and reminds the applicants of clinical units to complete the application via electronic administration system with attachment of the "audit form for resuse of single-use medical devices" approved by the IPC center.
2. The single-use medical devices can be reused only after the application is approved by the IPC center and co-signed by the associated committees.
3. All units stipulate the items and management policy of reusable single-use devices.
4. The clinical units record and report defective rate and expired rate of reusable single-use medical devices quarterly; and count the number of reused single-use medical devices, document the identification and tracking of exposed patients and perform testing for reusable medical devices monthly.
5. After comparison to the data between infection control information system and laboratory information system, the medical technologist of IPC center inform the physicians and clinical units about suspected cases.
6. The IPC center irregularly check the management policy of reusable medical devices in each unit.
7. The annular check report of reused medical devices from IPC center will be feedback to each unit

Results: Quality management index:1. The monthly associated complication rate of reusable medical devices2. The qualified rate of reusable medical devices3. The quarterly defective rate of reusable medical devices
Keywords::Reuse of single-use medical devices

PS 2-329

EFFICIENT ENVIRONMENT SURVEILLANCE CULTURE MONITORING ACTIVITIES WITH DEVELOPING COMPUTER PROGRAM

Soon Im Choi [a], Kyung Hee Lee [a], Chun Soo Kim [a], Nam Hee Ryoo [a,c], Sung Yeul Ryu [a,b], Jin Ho Cheon [d], Dong Jin Jeong [c]. [a]*Infection Control Team, Dongsan Medical Center;* [b]*Department of Internal Medicine, Keimyung University, Daegu, South Korea;* [c]*Laboratory Medicine, Keimyung University, Daegu, South Korea;* [d]*Electronic Data Center, Dongsan Medical Center*

Purpose: In the field of infection control, it is important to maintain and disinfect a clean environment as much as hand hygiene because spreading of bacteria is mainly through polluted surface or medical instruments. Some department conducts test for environment surveillance cultures regularly. This test should be well-organized, qualified, and revised every year. In order to manage scattered items of all departments efficiently, infection control team is in charge of developing 'environment surveillance culture' computation program.
Methods:
1. The overview of Environment Surveillance Culture computation program

(1) Registration of common items for 'environment surveillance cultures'
(2) Request and enrollment of examinations from each department through program, without submitting cooperation document
(3) Registration to Department of Laboratory Medicine
(4) Laboratory Medicine specialists confirm the result and attach comment.
(5) The department registered items check the result.

2. Education and promotion of use of the program
3. Evaluate the necessity of test and confirm the results.
4. The important notice is uploaded to intra-office network page.
5. Establish documented method of environmental surveillance culture.
6. Through the program, it is easy to request tests, see the results, and simplify the procedure.
Results:
1. Infection Control Team generalizes all procedures and coordinates each department.
2. Set the test date by using program and the lab manage possible dates for high-efficiency.
3. By posting the result of working place safety result to intra-office network page.

4. Through the development of computer program, environment surveillance monitoring procedure is highly-efficient. Also, the establishment of standards of testing specimen can avoid contamination.
Conclusions: Most departments are highly satisfied with the program because of increased work efficiency. In future, this program can be considered to contribute to inspect test results of epidemic outbreak and do 'quality assurance' of the medical practice directly related to infection control as well as consistent monitoring will be needed.

PS 2-330

EXPLORE THE BENEFIT OF IMPLEMENTATION CVBSI BUNDLES INFORMATION SYSTEM IN A HOSPITAL

Hui-Chun Chung [a,b], Hui-Li Jiang [c], Qing-Xiao Lin [e], Yu-Huai Ho [d], Chen-Hui Wang [c], Xiu-Hui Huang [a], Ya-Pin Xu [c], Lih-Shinn Wang [d]. *[a]Hualien Tzu Chi Hospital, Department of Nursing, Taiwan; [b]Buddhist Tzu Chi University, Institute of Medical Science, Taiwan; [c]Unit of Infection Control and Management, Hualien Tzu Chi Hospital, Taiwan; [d]Division of infection Diseases, Department of Internal Medicine, Hualien Tzu Chi Hospital, Taiwan; [e]Department of MIS, Hualien Tzu Chi Hospital, Taiwan*

Purpose: The purpose of this study was to establish a CVBSI Bundles Information System which composes the idea of integrated prevent *Central Line-Associated Bloodstream Infections. And constructed a convenience for electronic documentation, data storage, benefit evaluation and a platform from medical team member communication.*
Methods: CVBSI Bundles Information System was based on the hospital information system (HIS) and constructed into 5 pages, there could print patients' care information out from the system and reduce duplication writing. All the hospital ICN was in-charge central line management. Statistical analysis of the system function could be used as basis for assessing the quality of related work.
Results: Compare to last year, daily assessment and maintenance of central lines adherence rate were increased from 48.5% to 90.9% and 22.9% to 86.4%, *Central Line-Associated Bloodstream Infection rate was decreased\ from 4.8‰to 3.0‰, cost down 621,720NT$.*
Conclusions: CVBSI Bundles Information System did simplify the operation and handwritten medical records, reduce the *Central Line-Associated Bloodstream infections rate and cost down.*

PS 2-331

THE VIRULENCE EFFECT CAUSED BY *WZI* GENE IN *KLEBSIELLA PNEUMONIAE*

Li-Yueh Huang [a], Fei-Hsu Chen [b], Jen-Chang Chang [a], Yu-Kuo Tsai [a], Ci-Hong Liou [c], Ling Ma [a], Fu-Mei Lin [a], Yi-Jiun Ding [a], Pei-Jing Chen [a], Jung-Chung Lin [b,c], Kuo-Ming Yeh [c], L. Kristopher Siu [a,b,c]. *[a]Institute of Infectious Diseases and Vaccinology, National Health Research Institutes, Miaoli, Taiwan; [b]Graduate Institute of Microbiology and Immunology, National Defense Medical Center, Taipei, Taiwan; [c]Division of Infectious Diseases and Tropical Medicine, Department of Internal Medicine, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan*

Purpose: *Klebsiella pneumoniae* (Kp) is a well-known pathogen and a common reason of community-acquired and nosocomial infections causing liver abscesses, endophthalmitis, or meningitis. Capsular polysaccharide (CPS) is one of the most important virulent factors in Kp. The virulence effect caused by *wzi* gene that is involved in the attachment of the repeat unit of CPS to outer membrane remains uncertain. Previous studies indicate that deduced Wzi protein sequence is corresponding to capsular serotype (K-type). This study aimed to examine the gene actual effect on virulence and its changes associated with K-type switch.
Methods: In-frame deletion and replacement was used to obtain the deletion and switched mutants of the *wzi* gene in Kp strain 312, which isolated from liver abscess patient and harbored K20 CPS cluster. The *wzi* gene of switched mutant was replaced from K20-type to K1-type. The virulence was assessed through serum killing, neutrophil phagocytosis and mouse lethality assay.
Results: Comparison to the parental 312 strain (K20, serum-sensitive, phagocytosis-resistant, $LD_{50}=10^2$ cfu), 312Δ *wzi* mutant decreased 10^2-fold of LD_{50} and exhibited more susceptible in serum killing and phagocytosis. LD_{50} of 312Δ *wzi*::K1-*wzi* mutant was 10^3 cfu and there was no significant difference in virulence assay between 312Δ *wzi* and 312Δ *wzi*::K1-*wzi* strains.
Conclusions: The study demonstrates that *wzi* gene has impact in virulence in mice model, and contributes to serum killing and phagocytosis of Kp strains. Furthermore, replacement of distinct K-type *wzi* gene can also influence the mice lethality.

PS 2-332

EMERGENCE OF TWO KPC NEW VARIANTS (KPC-17 AND KPC-22) IN SOUTHERN TAIWAN: A CASE REPORT

Shu-Ching Hsu [a], Wen-Liang Yu [b], Mei-Feng Lee [c], Yin-Ching Chuang [c,d]. *[a]Infection Control Committee, Taiwan; [b]Department of Intensive Care Medicine, Taiwan; [c]Department of Medical research, Chi-Mei Medical Center, Tainan, Taiwan; [d]Department of Medicine, Chi Mei Medical Center-Liou Ying, Tainan, Taiwan*

Purpose: *Klebsiella pneumoniae carbapenemase* (KPC) is one of the most common carbapenemases. KPC-2-containing *K. pneumoniae* with sequence type (ST) 258 and ST 11 clones have been the most worldwide spread. We report a patient with two KPC new variants (KPC-17 and KPC-22) recovered from a patient in a nursing home.
Case report
An 86 year-old woman had stayed in a nursing home for 5 month. She was admitted to the hospital due to acute delirium on March 21, 2014. Brain CT showed mild cerebral atrophy. Laboratory data showed hemogram, 10.5 g/dL; WBC, 14,900/μL; CRP, 63.9 mg/L; and creatinine, 2.8 mg/dL. CXR showed mild bronchiectasis with probably superimposed infection. Empirical antibiotic was ceftazidime. The sputum culture yielded mixed normal flora. The blood and urine cultures showed no growth. However, CRP rose to 114.0 mg/L on March 31. Fosfomycin was added. The blood and sputum cultures showed no significant bacteria, but the urine culture yielded yeast-like organism. A CRP rose to 135.3 mg/L on April 7. Thus doripenem and fluconazole were used. Then condition was stable and she was discharged to a nursing home on April 14. On **June 19**, 2014, she returned with a fever of 38°C. Urine routine showed WBC, 50-99/HPF; leukocyte esterase 3+ and bacilli 3+. Co-amoxiclav was used for 7 days. The urine yielded imipenem-resistant *K. pneumoniae* (IRKP), only susceptible to amikacin, gentamicin, tigecycline and co-trimoxazole. On **July 9**, she had a fever of 38.1°C. Urine showed pyuria and IRKP, additionally resistant to tigecycline. Co-trimoxazole was used for 7 days and eradicated the IRKP. PCR for bla_{KPC} in the plasmid of the IRKP isolates and DNA sequencing confirmed bla_{KPC-17} in 1st IRKP and a new variant bla_{KPC-22} (GenBank acc no. KM379100) in 2nd IRKP.
Conclusions: We report two nursing home-acquired bla_{KPC-17}- and bla_{KPC-22}-harboring IRKP isolates. Clinicians should be alert to IRKP, which may be a KPC variant.

PS 2-333

FIRST MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS (MERS-COV) CASE IN SOUTHEAST ASIA (OUTSIDE MIDDLE EAST)

Z. H. Liew [a], M. L. Look [b]. *[a]Department of Renal Medicine, Singapore General Hospital, Singapore; [b]Department of Medicine, Hospital Sultanah Nora Ismail, Batu Pahat, Johor, Malaysia*

Middle East Respiratory Syndrome (MERS) is a viral respiratory illness caused by a coronavirus called MERS-CoV. It was first reported in Saudi Arabia in 2012 and has since spread to various Middle Eastern, European, North African and Asian countries. In this case study, we report a 54-year-old man who became the first laboratory-confirmed case of MERS-CoV infection in Malaysia, as well as in Asia (outside Middle East), and also the first death in this region due to the infection. He had underlying diabetes mellitus, complaining of cough, fever and shortness of breath for 2 days with recent visit to Middle East. Chest radiograph show a consolidation at the right midzone. Blood investigations showed a normal haemoglobin and white cell count with platelet 127 000/mm^3, creatinine 132 micromol/L, urea 11 mmol/L, CK 935 mmol/L, ALT 62 mmol/L and AST 145 mmol/L. He was started on intravenous Amoxycillin-Clavulanate acid, oral Erythromycin, and oral Oseltamivir for pneumonia and throat swab was sent for MERS-