

## Abstracts of the 7th International Congress of the Asia Pacific Society of Infection Control, Taipei, Taiwan, March 26-29, 2015

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Build the new Pull-down menus for pharmacist to improve pharmacist audit efficiency.

Intergrade the screen of computerized antibiotic audit system for ASP physicians' consultation and pharmacists' evaluation, which will help two-way communication, immediate feedback, and improve the quality of antibiotics usage.

**Result:** The rate of "pharmacists audit within 24 hours" during ASP promoting period was 100% in ICU, and more than 40% in total hospital; it was improved significantly. We plan to raise the rate up to 50% next year. The numbers of pharmacist recommendations for antibiotics prescriptions was increase from 4 cases / month to 30 cases / month.

**Conclusion:** Antibiotics Stewardship Program (ASP) need teamwork and coordination between healthcare workers and information technician, by modified computerized antibiotic audit system, the physician and pharmacist can provide more rapid and accurate recommendation for clinician, which will improve the antibiotic usage and patient safety.

PS 1-011

#### DECREASING MULTI-DRUG RESISTANT ORGANISMS CROSS-INFECTION RISK BY ANTIBIOTIC STEWARDSHIP PROGRAM

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**Purpose:** Due to increasing multidrug-resistant pathogens, our hospital started to join 3 years' program of CDC of Taiwan Surveillance of Antimicrobial Resistance in year 2013. Team of hospital antimicrobial control of our hospital is formed. Our strategies are mainly focused on two points: the appropriateness of using antibiotic and infection control policy. The infection control policy is included: hand hygiene, standard precautions of multidrug-resistant organisms, standard environmental cleaning.

**Methods:** Linking nurses system is formed. Regular schedule meeting is arranged to ensure the implementation of hand hygiene policy and feedback with incentive by the end of year. Using the computer alarm system to remind staff to take standard precautions for patients infected with multidrug-resistant organisms. Environmental surveillance is done by isolating culture of multidrug-resistant organisms and using ATP.

**Results:** The rate of hand hygiene compliance was >95%, implementation rate for standard precaution for patients infected with multidrug-resistant organisms was 100%. The rate for environmental cleaning was >90%. In year 2012 the hospital acquired infection density rate was 6.3% and ICU was 27.5%. After an effort making in 2013, the result was much improved, the former was 1.5‰ and the latter was 3.7‰. The rate of multidrug-resistant organisms in year 2012 was CRAB 23.3%, CRE.coli 1.6%, CRKP13.5%. In year 2013, the cases number was reduced, 64.2%, 27.3%, 14%, respectively.

**Conclusion:** Our study revealed that participating the Taiwan Surveillance of Antimicrobial Resistance program was able to use antibiotic appropriately and reduce cases of multidrug-resistant organisms

PS 1-012

#### EXPERIENCES SHARE OF ANTIBIOTIC PRESCRIPTION CONSULTATION, DE-ESCALATION AND FEEDBACK MECHANISM TO ENHANCE THE EFFICACY OF ANTIBIOTICS STEWARDSHIP

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**Purpose:** Antibiotic stewardship is one of the most important issues for the hospital infection control. The rule and regulation of the stewardship system has been operated for years. However, facing up to the constantly detection of the various multi drug resistance microorganisms, brings out that the rigor examinations and the control execution effectiveness of the antibiotic needs to be reviewed and improved all the time.

**Methods:** Our hospital has utilizing the database systems to assist executing in the antibiotic medication control since 2004. When antibiotics was prescribed via every medical system, the database system will assist to check the culture reports and consultation records in seven days. The infectious

disease specialist would follow the "laboratory reports", "current medical orders", "nursing records" and "TPR" at the analysis systems to exam then provide the professional commands for the upgrade or downgrade. For example, before the report of the blood culture, it could only approved three days of antibiotics. And the infectious disease specialist doctors also will control the using of the categories and days then permit to use. The system also provided "antibiotic adjustment proposals" in order to make the communications and feedbacks between the clinicians and infectious disease doctors.

**Results:** The infection control team also performed the statistical analysis regularly according to this information and most of the clinicians can identify to list the proper prescription by the infectious disease specialist professional advices. Antibiotics appropriate ratio increased from 30% to 60%.

**Conclusions:** The infectious disease specialist, the infection control and antibiotic teams working so hard for the execution and declaration for the antibiotic. The clinicians can use antibiotics correctly via ASP. We wish the antibiotics stewardship effectiveness and experiences can be shared with the partner hospital and take this as a reference to carry out the policy.

PS 1-013

#### ANTIMICROBIAL STEWARDSHIP: A REVIEW OF AUDIT AND FEEDBACK SYSTEMS AND EVALUATION OF OUTCOMES IN A MEDICAL CENTER IN TAIWAN

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**Purpose:** Antimicrobial stewardship (ASP) is an emerging field currently defined by a series of strategies and interventions aimed toward improving appropriate prescription of antibiotics in all healthcare settings. To estimate the effectiveness of professional interventions that, alone or in combination, are effective in antibiotic stewardship for hospital inpatients, to evaluate the impact of these interventions on reducing the incidence of antimicrobial-resistant pathogens and their impact on clinical outcome.

**Methods:** We developed a hospital-wide computerized antimicrobial approval system (HCAAS) to guide the use of antimicrobial agents in late 2004 in a 2700-bed medical center in Taiwan. Three strategies for improving antimicrobial stewardship were implemented: education, clinical infection specialists-based intervention, and regular audit and feedback interventions. The steering panel of the program was a committee composed of infection specialists, attending physicians, clinical pharmacists, infection control nurses, and medical laboratorists.

**Results:** Outcomes were to evaluate the impacts of HCAAS on the hospital from 2000 to 2012. Analysis of the rate approval to audit physicians and clinicians recommend acceptance rate in order to enhance communication between different divisions' physicians and establish partnerships. This antibiotic management mechanisms by subsequent statistical analysis showed a significant reduction in the use of regulatory antibiotics and healthcare-associated infections rate, total mortality, length of stay, patient was discharged 14 days after returning to rate the quality of patient outcomes indicators are showing positive to reduce the tendency.

**Conclusions:** The results show that interventions to reduce excessive antibiotic prescribing to hospital inpatients can reduce hospital-acquired infections, and interventions to increase effective prescribing can improve clinical outcome. This update provides more evidence about unintended clinical consequences of interventions and about the effect of interventions to reduce exposure of patients to antibiotics.

PS 1-014

#### PHARMACISTS IN AN ANTIMICROBIAL STEWARDSHIP PROGRAM

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**Purpose:** The Antimicrobial Stewardship Program (ASP) is an innovative and intensive practice-based activity for pharmacists focusing on the pharmacist's role in the area of appropriate use of antimicrobial agents