

**Methods: "Sterilization processes and performance failures" improvement measures:**

1. sterilization abnormal review meeting
2. Organize in-service education - Vacuum Autoclave sterilization proper operation of the use and effectiveness of really strong cognitive effect, should be "biological indicators dish" culture results as the basis for issuance of instruments and shelves.
3. Develop a "high-pressure steam sterilizer operation flow chart" by flowchart view of attempts to prevent personnel can not start where the body of the pressure cooker link, thus requiring the officer shall chart recorder autoclaves times, time, temperature, and signature body in a pressure cooker.
4. Amendment "Autoclave performance history table (packing area)" and the new "supply room Autoclave Effectiveness Monitoring Form (sterile material storage areas)."

Record form to partition responsible manner and in accordance with the effectiveness of the sterilization record cooker correct food items placed PCD challenge pack.

5. View, after the collection of information and discussion with the infection control unit, modify ISO BNCB0C316 autoclaves operating operating standards.
6. The implementation of all the equipment package tray, not subcontractors cloth or PE bag and send consumer items, are to be placed "within the autoclave bag chemical indicator strip"

As the use of units sterilization effect is indeed the last line of defense.

**Results:** After the implementation of improvement measures, high risk factor dropped by 80, sterilized in an autoclave quality vacuum effect is indeed correct rate of 100%.

**Conclusions:** By improving HFMEA anticipatory risk management style and processes, which can effectively avoid the sterilization efficacy due to human error caused the failure. With unusual event, let the unit colleagues to re-examine the effectiveness of the sterilization acuity individuals really effective, although improvements have to re-learn the process to fill the form and change the past, wrong mode of operation; but in order to ensure effectiveness and maintain sterilization is an urgent need to change patient safety. The purpose of the measures applied in the same low-temperature plasma sterilizer and ethylene oxide sterilizer can achieve even this improvement.

**PS 2-461****THE EPIDEMIC CONTROL IN EMERGENCY DEPARTMENT USES ZONING ISOLATION, MOVING LINES AND PERSONAL MANAGEMENT**

Ing-Ling Chen<sup>a</sup>, Mei-Miao Eu<sup>a</sup>, Tzu-Chieh Weng<sup>b</sup>, Chun-Cheng Zhang<sup>b</sup>, Hung-Jen Tang<sup>c</sup>. <sup>a</sup>Infection Control Committee; <sup>b</sup>Holistic Care Unit, Department of Internal Medicine; <sup>c</sup>Division of Infection Diseases, Department of Internal Medicine, Tainan, Taiwan

**Purpose:** The blocking of the epidemic should begin when patients enter medical institutions! Emergency department is an important checkpoint to patients in the infectious period. Identification of the patient who is with infectious disease as soon as possible, and implementing the zoning isolation and patient triage immediately will be the key to avoid such a patient entering the emergency department and causing the spread of the infection.

**Methods:** This 1273 bed medical center establish five aspects in Emergency Department to prevent and detect infectious diseases as complete as possible. Step1 : Build epidemic marquee in emergency triage to provide international and domestic epidemic information immediately. Step2 : Combined with emergency triage TOCC (travel, history, occupation, contact history and cluster) interrogation login and provide the basis to identify infectious disease. Step3 : Zoning isolation the suspected patients of infectious diseases immediately. Step4 : Dedicated emergency department physicians to assist in the differential diagnosis of infection diseases, beginning the treatment of infectious diseases while waiting for the bed. Step5 : Planning the exclusive moving lines for patient into the ward.

**Results:** Besides epidemic alert and patient's TOCC history taking, in response to the SARS epidemic, the hospital build negative pressure isolation treatment room in 2003, to zoning isolation the suspected patients of infectious diseases in the emergency department.

In 2011, the holistic medical care unit was firstly set up in a department of emergency. Seven physicians are on duty in three shifts, two of them were infection specialist who can help diagnose and do early treatment of emergency patients with infectious diseases. This practice shortened the time of waiting bed from 17 hours to 14.22 hours; and reduced the ratio of

time of waiting bed more than 48 hours from the 16.9% to 8.3%, which also results in a decreased ratio of transferring patients to ICU. Decrease the waiting bed time can decrease the rate of nosocomial infection in the crowded emergency department.

**Conclusions:** Timely, coherent and complete patient management, since the beginning of the patient into the emergency room, can prevent cross-contamination and the outbreak.

**PS 2-462****GP CLINIC DOOR HANDLE CONTAMINATION: THE RESULTS FROM 4 DOORS**

Harrison A. Edwards<sup>a</sup>, Eleanor G. Ludington<sup>b</sup>. <sup>a</sup>School of Medicine, James Cook University, Australia; <sup>b</sup>School of Medicine, University of Adelaide, Australia

**Purpose:** Healthcare workers' hand hygiene is an established principle in preventing spread of nosocomial infection. Multiple studies suggest that among healthcare workers, hand hygiene is unacceptably poor. For patients, it may be even less adequate. Therefore, a more reliably consistent means of infection control used in areas of high patient traffic may help reduce cross-contamination.

Building design-aided contamination control in medical facilities can be an adjunct to other means of control and may result in less reliance on chemical disinfection while also being less susceptible to human error, forgetfulness, and inconvenience.

It is hypothesised that a comparison of bacterial contamination of no-touch doors at GP clinics to doors with handles will demonstrate a difference in bacterial growth and hence the value of this traffic control-aided means of contamination and nosocomial infection control.

**Methods:** Cultures were obtained from the entrance door handles of three GP clinics that patients had to grasp to open. In addition, cultures were obtained from an automatic sliding door that opened untouched in an arrangement such that the same patient cohort entered through two sequential doors - one untouched and one touched - allowing a direct, controlled comparison of contamination and hence the efficacy of no-touch doors in medical facility design.

**Results:** Mixed staphylococcus species grew from the three doors that had to be grasped to open. Swabs from the sliding door produced no growth.

**Conclusion:** A simple change in medical facility door design in highly trafficked areas may help reduce cross-contamination.

**PS 2-463****THE EXPERIENCE OF PREVENTING NEEDLESTICK INJURY BY INSULIN PEN**

Jung-Hui Chen<sup>a</sup>, Ying-Chi Lu<sup>b</sup>, Huey-Jen Huang<sup>a</sup>, Shu-Ju Huang<sup>a</sup>, Su-Fang Yu<sup>a</sup>, Huan-Yu Huang<sup>a</sup>, Pei-Chen Cheng<sup>a</sup>, Shih-Ming Tsao<sup>a,c</sup>, Yuan-Ti Lee<sup>a,c</sup>, Chien-Feng Li<sup>a,c</sup>, Min-Chi Lu<sup>a,c</sup>. <sup>a</sup>Infection Control Team, Chung Shan Medical University Hospital, Taiwan; <sup>b</sup>Department of Nursing, Chung Shan Medical University Hospital, Taiwan; <sup>c</sup>Infectious Disease Division, Chung Shan Medical University Hospital, Taiwan

**Purpose:** In this medical center, a new type of insulin pen was introduced since 2013. Within 5 months, a total of eight nurses was injured by this stylus needle, and the incidence rate was 0.83%. To better protect nurses from being hurt by insulin pen needles, we initiated improvement measures to maintain work safety.

**Methods:** Since 2013, a new multi-dosage insulin pen needle has been in use, for which routine putting cover back and rotating off its needlestick after each use and replacing with a new one were required for each practice. To reduce needlestick injury, we implemented series of improvement measures, including the use of 32G×4mm instead of 31G×8mm needles, disposing needles in a special designed needle trash bin, and initiating the related training program.

**Results:** After the implementation of improvement measures, the incidence of insulin pen injuries decreased. Four nurses (incidence rate: 0.42%) in Jun. to Dec. of 2013 and 3 nurses (incidence rate: 0.31%) in Jan. to Sep. of 2014 suffered from such injuries. Among these injured, no seroconversion occurred.

**Conclusions:** For the convenience of the patients and to reduce the amount of disposable needles, more frequent uses of the pen-type injection need special efforts to reduce needlestick injuries. Our effort of providing prevention tasks contributed to the safety of healthcare workers in the hospital.