coherence action, So not wash your hands. In order to clarify and explain the importance of hand washing opportunities to introduce hand ATP bioluminescence technology, Corroboration before touching the respirator after (hand washing) hands the number of colonies.

Results: Using ATP bioluminescence technique to enhance hand washing compliance, we found if respirator before hand contact number is 5876 ~ 1142RLU colonies ranging after washing hands can be reduced to 350RLU, explained the importance of washing hands again. This time, by direct observation and respiratory therapy department colleagues interactive process of consensus, clearly defined time points to the scene to wash their hands, a better understanding of the clinical staff who fail to comply reasons. After implementation, respiratory therapist in before clean / aseptic procedure compliance timing can be increased to 100%.

Conclusions: Therefore, and respiratory therapy chief technology officer of communication and reviewing of original plan. The survey results series as a unit scenario simulation teaching and lesson plans, Help to improve the hand-washing compliance.

PS 2-440

AFTER CLEANING THE EFFECTIVENESS OF THE MONITORING INSTRUMENTS CLEANLINESS

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Purpose: Cleaning is an essential step for instruments disinfection or sterilization. Disinfection or sterilization procedures may be failure in case of residual organic substances, such as blood clots, pus, proteins, mucus, oil and other microbes, retained on the instruments will avoid from interacting with disinfection agents by producing biofilm.Therefore, check the performance of cleaning is very important.

Methods: The study was conducted in operation rooms of a teaching hospital. The operation rooms included 23 units, 2 sets automatic washing machine, one ultrasonic cleaning machine. We perform automatic washing machine 33 times, monitoring the effectiveness of ultrasonic cleaning machine 22 times and blood and residual amount of protein up to 90 times weekly. These surveillance cover five major department, such as surgery, gynecomastic, urology , cardiac and plastic.

Results: We found 6 times cleaning failure from the two automatic washing machines. We adopted some procedures, such as washing time (15 minutes was extended to 20 minutes), a washing temperature (45 °Cincreased to 50°C), enzyme washing time (20 minutes was extended to 25 minutes). The results were all qualified after above management.

Conclusions: We apply the indicator before disinfection or sterilization, thus we not only checks the error as soon as possible but also standardized the essential steps-cleaning despite of different operators.

PS 2-441

AN EXPLORATORY STUDY OF MEDICAL PROFESSIONAL STAFFS' KNOWLEDGE, ATTITUDES AND BEHAVIOR ON BUNDLE INTERVENTION

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Purpose: Recognition and prevention of the health-associated infection can be reduced by introduction of bundle intervention. Bundle care is effective for preventing infection. The purpose of this study was trying to understand the study of medical professional staffs' knowledge, attitudes and behavior on bundle intervention.

Methods: This is a cross-sectional study performed at regional teaching hospital in northeast Taiwan. All studies were performed after the approval from the institute of the Institutional Review Board for the Protection of Human Subjects at a regional teaching hospital. After deleting invalid questionnaires, raw data was archived and statistic analyzed by Statistical Package for Social Science for Windows 12.0 software. The research adopts Descriptive statistics, T-test, ANOVA analysis, Scheffe post comparisons, and statistical methods to analyze the relationship of each variable.

Results: The subjects of this study are 346 medical professional staffs of Regional Teaching Hospitals. The structured questionnaires were administered with return rate of 91.3% (316 validated questionnaires).

↓ Table 1、N = 316					
Variables	Sex	N	Mean	SD	T Value
Knowledge on Bundle Intervention	Female	266	9.14	1.54	-3.56*
	Male	50	9.67	.77	

* p < .05

↓ Table 2			
Correlation	Attitudes	Behavior	Knowledge
Attitudes	1		
Behavior	.325**	1	
Knowledge	.331**	.044	1

** p < .01

Conclusions: Bundle care would be an infection control strategy for improving quality of care. The results provide first-line clinical staff and hospital manager.

- First, Bundle Intervention have a significant positive correlation with knowledge and gender.
- Second, Bundle Intervention have a significant positive correlation with knowledge and attitudes.
- Third, Bundle Intervention have a significant positive correlation with attitudes and behavior.

PS 2-442

EVALUATING THE EFFICACY OF LONG-LASTING ENVIRONMENTAL DISINFECTANT TINOX IN A NICU

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Purpose: The patients in a neonatal intensive care unit (NICU) have compromised immunity. A variety of infectious agents contaminate environment may cause infections. The purpose of this study is to evaluate whether a new composite material of nano-titanium dioxide and nano-silver (TINOX disinfectant) can effectively suppress the microbial load of hospital environments and how long does it work.

Methods: The study was carried out in the NICU of Mackay Children's Hospital. We selected 7 frequent contact surfaces, including incubator door handle, computer keyboard and mouse, suction switch, respirator control panel, physiological monitor, syringe pump, and nursing trolley counter. We determined microbial load by adenosine triphosphate (ATP) monitor. TINOX application was done and the microbial load was determined before and after application. We also measured post-application effect one and two months later without further application. A comparison of microbiologic load before and after TINOX application and post-application effect were analyzed.

Results: The average ATP value before TINOX application was 297 relative light units (RLU), and the average value after TINOX application was 68 RLU. The post-application ATP average value in fourth and sixth weeks was 24 RLU. There was significant decrease of contaminates before and after TINOX application ($p = 0.006$). There was no significant difference between application and post-application periods ($p = 0.447$).

Conclusions: The TINOX could decrease microbial load on contact surfaces effectively. The post-application effect could last at least 8 weeks except nursing trolley counter. Long term study should be done to evaluate the effect of TINOX for health care associated infection.

PS 2-443

A STUDY OF APPLYING WORKSHOP ON-THE-SPOT DEMONSTRATION IN SAFETY NEEDLES IMPLEMENTATION

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Purpose: Needlestick have been found to be the highest frequency of occupational injuries. Researches indicate that some techniques and equipment can prevent needlesticks, such as the use of safety needles. The purpose of