Best Practice Workshop on Disinfection, Sterilization and Infection Control of ‘Reusable Surgical Instrument’ – Utilizing Steam and Other Sterilization Methodologies

DATE: August 19 - 20, 2013 (2 days)
VENUE: HOLIDAY VILLA, SUBANG, MALAYSIA

COURSE OUTLINE:

The function of cleaning, disinfecting and sterilization of reusable "Surgical Instruments" to the untrained eye, may appear to be a fairly repetitive, mundane and simple task. This however is untrue as the superior results sought, can only be achieved via ‘due diligence’, knowledge and training of the persons involved. There are numerous infection control and other practical challenges faced, some known whilst others would be hard to detect, as not clearly visible to the eye. These ‘failing points’ if not dutifully identified and addressed at the very start of the disinfection & sterilization process, would certainly jeopardize the end result. This must ‘never’ happen! Hence the need for on going staff awareness, training and vigilance, over and above the Process control & interruption interlocks built into Sterilization equipment to endorse the ‘Sterile - Pass’ status integrity for each and every completed Sterilization cycle!

How does ‘One’ guarantee this result?
This is what the “2 Day Workshop” on the sterilization of reusable - surgical instruments is all about. The consequence of allowing a compromised / failed pack to slip through the system ‘undetected’, - for what ever reason, is unacceptable as it would put a Patient’s health and / or life at risk and could certainly delay a Patients’ return to wellness sooner.

Finally, the use of an undetected, ‘failed (un-sterile)’ surgical instrument or linen pack in Theatres, could well lead to post operative complications through no fault of the Surgeon. The risk here could be that - Infections including; post operative septicemia, transmission of viruses, including HIV and hepatitis, and prion-related diseases (eg. Variant Cruetzfeld Jacob Disease or CJD) could follow as a result. This could make for a disappointed Surgeon($) + costly medico-legal implications that would best be avoided.

In this workshop, the multiple processes, tasks and routines that are incorporated within the Sterile Supply System will be addressed. Candidates will have an opportunity to share, compare notes and discuss methodologies adopted within their own Theatre / Central sterile supply departments (TSSUs / CSSDs) and where there is scope for improvement(s), they will be motivated to follow up the matter with their respective Supervisor / Manager / Head of Department to make the change, for the benefit of the department and Healthcare Facility.

Also covered in depth during this workshop is the subject on instrument sterilization using “Steam under Pressure”. Steam is the most widely used agent for sterilizing world wide. Australian / New Zealand Standard - AS/NZS 4187:2003 will be widely Referenced and the process of validation, steam quality, sterilizer maintenance and trouble shooting will be discussed. Finally, other methods of surgical instrument sterilization utilizing; dry heat, hydrogen peroxide gas plasma and peracetic acid, liquid and now ozone sterilizers (the latter being ‘low temperature’ processes) will be touched upon.

ADMINISTRATION DETAILS:
Venue : Holiday Villa, Subang, Malaysia
Time : 9.00am to 5.30pm
Others: HRDF Claimable under SBL Scheme
Inhouse training enquiries are welcome!
For all enquiries, please contact:
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ORGANISED BY:  
IN ASSOICATION WITH:
TRAINER’S PROFILE:
Octo Moniz, (CEng., MBA (Tech. Mgt.))

Octo is an experienced and highly motivated Ex-Marine and now Senior Hospital Engineer with numerous years of ‘hands on’ working experience both in ‘onshore and offshore’ industrial environments. His sound technical knowledge and background is supported by numerous years of operations, maintenance and management of a diverse range of plants comprising; steam boilers, pumps and compressor systems, HVAC and power generation plant, including the specialist field of ‘Steam Sterilization of reusable surgical instruments and equipment”. These career opportunities provided him with a wealth of knowledge and experience to make him a respected professional in relevant engineering disciplines.

Further, Octo is able to link engineering fundamentals with the practical aspects of plant design, operations and maintenance to enhance Plant efficiency and performance right through its designed life. He is also thorough with the subject matter, strong with complex problem solving and touches on safety, life cycle costing, energy cost savings and performance enhancement in his presentations.

Finally, he is always focused, committed, passionate and enthusiastic whilst presenting his workshops. He has therefore become a popular and well sought after Instructor. Also, his pleasant demeanour and ability to share his knowledge and experience with the entire class in a structured and dynamic manner, keeps all the participants engrossed to the very end.

WHO SHOULD ATTEND:
• Theatre - Nurse Managers
• Managers supervisors of CSSD / TSSU Dept. in Hospitals
• Managers engineering departments
• Companies servicing the supply needs of TSSU / CSSD Departments.

PROGRAMME:
DAY 1
08.00 Registration
08.30 Introduction
    Ice breaker – Candidate introductions
    Introduction to “Microbial Hazards” and ‘Targets Set’.
TUTORIAL 1
10.00 MORNING TEA
10.15 Sterilization Efficiency
    • Rate of Biocidal action
    • Initial contamination level (bio-burden
    • Assurance of Sterility Best Practice Steps to follow
Sterilisation Process Testing-Why ‘test’?
    • Physical
      □ Thermometric test
      □ Leak rate test
      □ Measurement of radiation dose
    • Chemical Indicator
      □ external indicators
      □ internal indicators
      □ removal of air (Bowie-Dick) test
      • Biological indicators
      □ preparation
      □ standardization
      □ incubation
      □ interpretation of results
TUTORIAL 2
12.30 LUNCH
13.30 Importance of Testing Programs
    • qualifying tests
    • routine tests
    • limitations of Sterility tests
      □ number of samples
      □ culture methods
      □ antimicrobial action and accidental contamination
Preparing and Packing Instruments to be Sterilized.
    • Cleaning and disinfection
      (Decontamination)
      □ Selection of cleaning solutions & disinfectants
      □ Equipment & methods; pre-cleaning / manual / mechanical & ultrasonic
      □ Drying / inspection, lubrication and repair
DAY 1 (Cont’d)

• Packaging & Wrapping of Items for Sterilization
  □ Selection of packaging material
  □ Package size and labelling
  □ Specific packaging and wrapping requirements

Methods of Wrapping & sealing of packs & bags

TUTORIAL 3

15.00 AFTERNOON TEA
15.15 Principles of Dry Heat Sterilization;
  ▪ Moist / Dry heat and Biocidal action
  ▪ Bacterial Spore – Mechanism to resist heat
  ▪ Heat sterilization process –Design

DAY 2

08.30 Recapture key topics covered on Day One and Candidate queries?
08.45 Principles of Dry Heat Sterilization (contd.)
  ▪ Susceptibility of Micro-organisms
  ▪ Sterilization efficiency ($\eta$) & Influencing factors
  ▪ Temperature
  ▪ Moisture levels
  ▪ Dry Heat Sterilization Application

Dry Heat Sterilization Processes
  ▪ Types of Dry Heat Sterilization:
    □ hot air sterilization
    □ infrared & microwave radiation
    □ heat conduction, flaming & incineration

TUTORIAL - 4

10.00 MORNING TEA
10.15 Steam (increased pressure) Sterilizers
  ▪ Principles & Fundamentals of Steam Sterilization
    - Why steam is a sterilant of choice

• Types of steam sterilizers;
  □ Downward displacement
  □ High pre- vacuum
  □ Flash (dropped instrument(s)
    - air removal
    - sterilisation time & temperature relationship
    - penetration time / holding time
    - drying of the 'load' - how it occurs
    - chamber and door configuration / construction
    - process control, piping and valves

• Sterilizer performance monitoring & calibration
  - performance management
  - validation processes

TUTORIAL – QUIZ

12.30 LUNCH
13.30 Operations & maintenance of steam sterilizers
  ▪ Loading & UnLoading of Sterilizers
  ▪ Quality Management
  ▪ Storage and handling of ‘items’

Trouble Shooting – High Pre-vac Sterilisers
  ▪ Steam Quality and pressure requirements
  ▪ Steam reticulation ‘Considerations’ from boiler to point of use
  ▪ Separating and Throttling Calorimeters – Steam ‘dryness fraction’ calculations
  ▪ Detection / Determination of % “Air in Sterilizer” by calculation & possible causes & reason for cycle rejection

15.00 AFTERNOON TEA
15.15 Low Temperature Sterilizers & Liquid Sterilants
  ▪ General
  ▪ Ethylene Oxide Sterilizer
  ▪ Hydrogen peroxide plasma sterilizer
  ▪ Peracetic acid sterilizing equipment
  ▪ Liquid sterilants

16.45 Candidate Questions??
  Complete and hand in of the “Course Evaluation Form”
  Certificate of attendance distribution