Medical Waste Management and Health and Safety Review

in Collaboration with Al-Essa Medical & Scientific Equipment Co. W.L.L

Kuwait University Health Science Center
10 January – 14 January, 2016
Dedication to Dr. T. S. Srikumar
Agenda for the next 4 days

1. Overview of waste management and health and safety walkthrough findings
2. Hand Hygiene
3. Global Perspectives
5. Chemical Compatibility/Spill response
6. Spill response workshop
7. Waste management segregation /containers
8. Post conference quiz
9. Let the Fun Begin – Round 2 – 2016!

And......

Open discussions /Q+A during the 4 days!
Risk Tolerance - 2015

Safest

Safer

Safe

Operational - 2016
History

Extensive Health and Safety and Waste Management Presentations
January – February 2012

1. Global Perspective
2. Environmental Health and Safety Issues
3. Activities that generate Medical Waste
4. Risk Assessment
5. Definitions of Medical Waste - WHO
6. Management of waste in the facility
7. Decontamination
8. Transport, Treatment/ Disposal of Medical Waste
May 2013

Day 1 Physicals (Assessments):
Faculty of Allied Health Sciences
Faculty of Dentistry
Kuwait University Dental Center

Objectives: Review Health and Safety and Waste Management Practices relative to training that was provided last year
1. Essential safety equipment is available:

   First Aid kits
   Spills kits
   Eyewash stations
   Safety showers
   Fire blankets
   PPE available and being used
   Warning / Caution Signage
   Sinks
   Soap
   Alcohol hand rub
   Pressurized containers secured
Observations (continued)

2. Waste management practices generally good with a few gaps. Hazardous chemical require some additional labeling

3. Staff responsive to health and safety questions related

4. MSDS available in most but not all areas

5. SOPS/Policies available in some but not all areas
Observations Day 2

1. Essential safety equipment is available:

- First Aid kits
- Spills kits
- Eyewash stations
- Safety showers
- Fire blankets
- PPE available and being used
- Warning / Caution Signage
- Sinks
- Soap
- Alcohol hand rub
- Pressurized containers secured
Observations (continued)

2. Waste management practices generally good with a few gaps. Hazardous chemical require some additional labeling and storage modifications.

4. Range of labels and posters relative to management of healthcare waste streams.

5. Staff responsive to health and safety questions related.

6. MSDS available in most but not all areas.

7. Safety Policies posted in some areas but not all.

8. Storage of chemical supplies is difficult in some areas due to space limitations.
TRaverse CITY: Microfibers were found inside the body of a Great Lakes fish, shown in this July 28, 2014 photo.—AP

SCientists: Great Lakes teeming with tiny plastic fibers

TRaverse City: Scientists who have reported that the Great Lakes are awash in tiny bits of plastic are raising new alarms about a little-noticed form of the debris turning up in sampling nets: synthetic fibers from garments, cleaning cloths and other consumer products. They are known as “microfibers” — excessively fine filaments made of petrochemical-based materials such as polyester and nylon that are woven together into fabrics.

“When we launder our clothes, some of the little microfibers will break off and go down the drain to the wastewater,” said Laura Kammin, pollution prevention specialist with Sea Grant Michigan.

According to three-quarters of the bits they’ve found are fragments of larger items such as bottles. Smaller portions consist of microbeads, Styrofoam and other materials. But when Mason’s team and a group from the Illinois-Indiana Sea Grant program took samples from southern Lake Michigan in 2013, about 12 percent of the debris consisted of microfibers. It’s unclear why the fibers were three times as prevalent in that area as elsewhere in the lakes, although currents and wave actions may be one explanation, said Mason.

“Once the fibers are in place, they mix with dust, which is washed off buildings and cars, and the debris is washed down the drain into the lakes,” said Mark Veith, director of Sea Grant.

Health monitors: Startups and big tech at show promote analytics generated by wearables

LAS VEGAS: It’s not just how you’ve eaten or how you’ve burned in a day. Your health monitors are capturing all of that data — your work, your activities, your food intake, your exercise, your stress levels.

“We have a lot of data, then stop using the data,” said entrepreneur of Fittingu, a Beijing startup that showed off an app that can make 12-week fitness plans detailed and customize them in shape. “If you use the data, they’ve got the tracking.”

Health monitors: Startups and big tech at show promise analytics generated by wearables, exercises to get pregnant, etc. but aggregation and use by aggregators so it can be worse.

“If we go on by ourselves, it can be worse,” said Veith. “That could be used for analytics.”

Managing the data: Of course, with more use, there are privacy concerns.

Turning the tide: “A lot of we want numbers; at least we have data and Jason Fass of Zillow.”

LAS VEGAS: In an interview with The Wall Street Journal, Jason Fass of Zillow said that making an app for tennis, baseball, Zepp has been involved in an interview with the Wall Street Journal about the benefits of using technologies to help people get better at their sport. The trend of startups that can measure and give feedback in real-time has been growing, but it’s not always clear what kind of data is being used and whether it’s being used well.

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DIVERS PURSUE CLEANSING MARINE ENVIRONMENT

KUWAIT: Kuwait Dive Team has removed three tons of waste from offshore locations in Al-Salikhabat. The discarded items, including plastic bags and cans, posed a hazard to the coastal environment, birds and sea creatures' habitat in Kuwait Bay, said Walid Al-Shatti, in charge of the team's operations. The littering was done by sea men boarding vessels and goers, he said, adding that some of the waste had been pushed into the sea through sewers during recent heavy rains.

The team, which is affiliated with the Environmental Voluntary Foundation (EVF), carried out the clean-up in coordination with Kuwait Municipality, Environment Public Authority (EPA), Natural Therapy Department of the Ministry of Health, as part of the "clean Kuwait beaches" campaign, with support from the Ministry of State for Youth Affairs. It will proceed to cleanse the Kuwaiti beaches and islands, he said, indicating that further guidance would be addressed to the sea goers and fishermen to spare the marine environment such harmful acts.

Emphasizing necessity to deal with all sources and causes of pollution, Shatti called for stricter punishment against violators and enhancing further public awareness of the necessity to safeguard the marine wild life. Moreover, he expressed hope that projects worked out for such purposes be pursued, particularly those related to protecting the bay, where diverse species of marine creatures lay eggs. — KUNA
Original Research Article

Role of a multimodal educational strategy on health care workers’ handwashing

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Key Words: Hand hygiene, hand hygiene compliance, health care workers’ hand hygiene compliance, World Health Organizations’ My 5 Moments for Hand Hygiene methodology

**Background:** Good hand hygiene is the single most important strategy used to prevent health care-associated infections (HAIs); however, health care workers’ (HCWs’) hand hygiene compliance rates range between 25% and 51%. This study aims to determine if a multimodal strategy using the World Health Organization’s (WHO’s) My 5 Moments for Hand Hygiene methodology increases HCWs’ compliance with handwashing and awareness of the importance of good hand hygiene in the prevention of HAIs.

**Methods:** A quasi-experimental, 1-group pre-post survey design was used to test awareness and knowledge. A simple interrupted time series methodology at baseline and 3 months was used to monitor hand hygiene compliance.

**Results:** Overall, HCWs’ hand hygiene compliance increased from 51.3% to 98.6%, with an odds ratio of 71.10. The pre-post survey demonstrated HCWs were aware and knowledgeable of the importance of good hand hygiene. Eight post-survey questions focusing on the strategies used to promote hand hygiene demonstrated statistical significance using a 1-sample t test, with P values ranging from .000-.024.

**Conclusion:** A multimodal approach using the WHO’s My 5 Moments for Hand Hygiene does increase HCWs’ hand hygiene compliance and awareness and knowledge of the importance of hand hygiene in the prevention of HAIs. Using this approach can produce a positive social change by reducing preventable disease and decreasing HAIs not only within a facility but also in the community.

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Your 5 moments for HAND HYGIENE

1. BEFORE PATIENT CONTACT
   WHEN: Clean your hands before touching a patient when approaching him or her
   WHY: To protect the patient against harmful germs carried on your hands

2. BEFORE ASEPTIC TASK
   WHEN: Clean your hands immediately before any aseptic task
   WHY: To protect the patient against harmful germs, including the patient's own germs, entering his or her body

3. AFTER BODY FLUID EXPOSURE RISK
   WHEN: Clean your hands immediately after an exposure risk to body fluids (and after glove removal)
   WHY: To protect yourself and the health-care environment from harmful patient germs

4. AFTER PATIENT CONTACT
   WHEN: Clean your hands after touching a patient and his or her immediate surroundings when leaving
   WHY: To protect yourself and the health-care environment from harmful patient germs

5. AFTER CONTACT WITH PATIENT SURROUNDINGS
   WHEN: Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving - even without touching the patient
   WHY: To protect yourself and the health-care environment from harmful patient germs

WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.
How to handrub?
WITH ALCOHOL-BASED FORMULATION

1a. Apply a palmful of the product in a cupped hand and cover all surfaces.
1b. Rub hands palm to palm
2. Backs of fingers to opposing palms, with fingers interlocked

How to handwash?
WITH SOAP AND WATER

0. Wet hands with water
1. Apply enough soap to cover all hand surfaces.
2. Rub right palm over left dorsum with interlaced fingers and vice versa
3. Rotational rubbing of left thumb clasped in right palm and vice versa
4. Palm to palm with fingers interlaced
5. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

20-30 sec

8. Rinse hands with water
9. Dry thoroughly with a single use towel
10. Use towel to turn off faucet

...once dry, your hands are safe.

48-60 sec

11. ...and your hands are safe.
Your 5 Moments for Hand Hygiene
Dental Care

1. BEFORE TOUCHING A PATIENT
   Why? Clean your hands before touching a patient.
   Why? To protect the patient against harmful germs carried on your hands.

2. BEFORE CLEAN/ASEPTIC PROCEDURE
   Why? Clean your hands immediately before performing a clean/aseptic procedure.
   Why? To protect the patient against harmful germs, including the patient’s own, from entering his/her body.

3. AFTER BODY FLUID EXPOSURE RISK
   Why? Clean your hands immediately after a procedure involving exposure to body fluids (and after glove removal).
   Why? To protect yourself and the environment from harmful patient germs.

4. AFTER TOUCHING A PATIENT
   Why? Clean your hands after touching the patient at the end of the encounter or when the encounter is interrupted.
   Why? To protect yourself and the environment from harmful patient germs.

5. AFTER TOUCHING PATIENT SURROUNDINGS
   Why? Clean your hands after touching any object or furniture in the patient surroundings when a specific zone is temporarily and exclusively dedicated to a patient - even if the patient has not been touched.
   Why? To protect yourself and the environment from harmful patient germs.

http://www.slideshare.net/diegozanatagritti/guideline-hm-2012-oms
Steps

TRACK | TRENDS | REWARDS

Days ▼

Sun, January 10

7833/6000

Daily steps
Observations

1. Essential safety equipment is available:

   First Aid kits   Spills kits
   Eyewash stations   Safety showers
   Fire blankets   PPE available and being
   Warning / Caution Signage   Sinks   Soap

   Alcohol hand rub not always present
   Pressurized containers secured in some areas but not others*

   •   *Clarification to follow…..

2. Waste management practices generally good with a few gaps.
   Some inappropriate use of bins

3. Staff responsive to health and safety questions related

4. Lack of consistent educational posters for waste management

5. Storage of chemical supplies is difficult in some areas due to space limitations
SAFETY RULES

- Do not perform unauthorized experiments.
- Never work in the lab alone.
- Report all accidents immediately to your teacher.
- If vapors generated are toxic, use a fume hood.
- Wear chemical splash goggles.
- Use chemical resistant aprons.
- Wear chemical resistant gloves.
- Do not wear loose sleeves.
- Do not wear shorts.
- Do not wear sandals.
- Do not wear contact lenses.
- Do not eat or drink.
- Keep aisles clear.
- Extinguish burners when away from desk.
UN Initiative on Greening
Procurement in the Health Sector from Products to Services

Landscape Analysis for the Technical Consultation, Bonn: 29-30 August 2013

World Health Organization
Brief report

The use of a process challenge device in dental office gravity displacement tabletop sterilizers

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Key Words: Sterility assurance Biological indicator Process challenge device Dental instrument sterilization Chemical indicators

There is evidence that dental office sterilizers often fail to pass the challenge of a biological indicator test. The use of a class 5 integrating indicator in each load could reduce the risk of instruments being released when all parameters for sterilization have not been met.

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