Welcome Note  (By Farouk Merhebi – EHSRM Director)

Dear Readers

In an attempt to improve waste management situation along Bliss Street, EHSRM, in collaboration with the Neighborhood Initiative and other departments at AUB, organized a workshop for Bliss street restaurants, cafes and fast food outlets to identify the main problems affecting the street and define joint solutions in relation to the collection and disposal of waste and identify a roadmap for collective engagement and action.

To extend its outreach, EHSRM provided two lectures for the University for Seniors entitled “Lebanon and its Garbage” and “AUB’s Carbon Footprint”. Safety concepts were also introduced to students and staff through the Office of International Programs and the New Employee Orientation training organized by HR Department.

EHSRM, in collaboration with 3M, organized a training of trainers workshop to nursing, UHS and infection control staff at AUBMC on fit testing of N95 respirators. EHSRM is currently working with FPDU on a signage project to make visible the pre-designated safe assembly areas on campus and at AUBMC.

The use of radiation for diagnostic and therapeutic purposes is a common practice that is used by physicians to detect and cure a wide range of medical cases. The aim of this article is to clarify the risks associated with the use of radiation, and shed the light on patients’ radiation safety.

Many people associate radiation exposure with contracting cancer; although this relation is not incorrect, the doses used in Diagnostic Radiology are low enough to reduce this risk to negligible levels (refer to the statistics section for typical doses of commonly used radiographic procedures). Nowadays, with the major developments in technology, new radiographic machines emit much lower levels of radiation while providing much better image quality.

The use of radiation in medicine is highly regulated; any exposure to radiation must be well justified by the attending physician, and the patient shall be well informed about the associated risks and his/her rights.

During any radiographic procedure, the patient must be well informed and protected; thyroid and gonads are among the most radiosensitive organs of the body, and the radiographer shall protect them prior to imaging.

During imaging, patients shall follow the instructions of the radiographer in order to achieve a good image from the first trial; otherwise, the patient will be exposed to unnecessary additional radiation to repeat the procedure.

The fetus is very sensitive to radiation especially during the first three months of the pregnancy, and therefore, it is the patient’s right and the radiographer’s duty to ensure and document that any female patient is not pregnant prior to taking any radiographic image. The patient must notify the radiographer and her doctor in case she was or suspected to be pregnant, and the radiographer is required to investigate the possibility of pregnancy prior to performing the procedure. Female patients, do not be surprised if radiographers asked you about your last menstrual period. This is part of their duty!

In case a mobile radiographic unit was used in a patient’s room, it is the responsibility of the radiographer to ensure that only the patient will be in the room during imaging. In case another person will be present to hold the patient for example, he/she must wear a lead apron.

That was a glimpse about patients’ radiation safety, a very wide, controversial and technical topic. EHSRM will be more than glad to assist you in any radiation safety related issue.
The graph represents typical doses of commonly performed radiologic procedures, as per the Health Physics Society Fact Sheet.

For comparison, the red line (3mSv) represents the average yearly background radiation dose. Background radiation is the radiation emitted from natural sources such as stars, and radionuclides naturally present in food and soil. The background radiation dose may vary from one region to another, and can not be avoided.

A single dose of 1000 mSv can cause radiation sickness and nausea; while 10,000 mSv is fatal within weeks.

Answers to “Think Safe”

1- b- False; most of the radiopharmaceutical administered to patients will be decayed within 24 hours.

2- b- 10 days to 2 weeks is a relatively acceptable period for the radioactive iodine to decay to safe levels. During the first week, it is recommended that the patient apply isolation measures as per the instructions of the physician and the radiation safety expert. During the second week, less measures are needed, while still avoiding close contact with children and pregnant women.

3- d- All of the Above; The extremely strong magnetic field continuously present in the MRI room attracts metals and accelerates them to very high speeds which could cause injury to the patient and/or staff. For instance, in the presence of such high magnetic field, metallic implants could move, heart pacemakers can malfunction, and tattoos containing traces of metals could cause burns. Therefore, it is crucial to provide the technologist with full details in order to ensure that the patient will not be harmed once he/she enters the room.

The Environmental and Chemical Safety Unit removed hazardous chemical waste from DTS & Post Hall; conducted laboratory inspections in Chemistry; conducted training sessions on chemical handling, PPEs, electrical safety, asbestos and office and lab ergonomics for PLM staff, RNs & safety wardens; contributed in the Iraqi Pharmacists’ Training Program on Cancer chemotherapeutic drugs concerning the management of hazardous drugs. A baseline assessment on healthcare waste management at AUBMC is being prepared in collaboration with AUBMC.

The Health Physics Services Unit finalized and published the revised University Radiation Safety Regulations; provided two grand rounds of radiation safety to Nursing staff; published online radiation safety orientation sessions to Nursing staff and attending physicians; followed up with the Lebanese Atomic Energy Commission (LAEC) regarding the license applications for the PET and Cyclotron facilities and the yearly quality control testing on radiologic equipment at AUBMC required for license renewal; arranged for two Radiation and Laser Safety Committee meetings.

The Life and Fire Safety Unit pursued the testing and commissioning process of the safety related systems/features in the Faed Irani Oxy Engineering Complex and the Issam Fares Institute Building; started the annual life and fire safety inspection round at AUBMC; offered two hands-on portable fire extinguisher training sessions for AUBMC PLM Staff, electrical safety training session to AUB Safety wardens, and fire safety session for AUB new employees; reviewed 5 in-house renovation projects at AUB and AUBMC.

The Occupational Safety Unit conducted the Annual Life and Fire Safety round; provided fire safety training to new staff and to designated wardens; conducted fire drills in Buildings 23 and 56; and participated in the planning, conducting, and evaluation of the annual infant abduction drill.

The Risk Management Unit followed up on the received incident reports; attended the Risk Management committee meeting at AUBMC; provided incident reporting training for new staff and for Office of International Programs students; and provided safety recommendations related to students activities.

The Sanitation and Biosafety Unit staff conducted fit testing for MED-IV students & PLM staff members; assisted in the N95 fit testing “Train-The-Trainer” workshop organized in collaboration with 3M; tested & commissioned In-place HEPA filters at the Environment Core Laboratory; reviewed and commented on a bid for the purchase of three new biosafety cabinets; attended the “14th World Sterilization Congress”-Antalya, Turkey.

In the spotlight

Salah El Dean Bayyoud
Bachelor of Mechanical Engineering (1994)

Mr. Bayyoud joined EHSRM in April 2009 as the Occupation Safety Officer at the Medical Center after several years of working in different disciplines including fire protection systems and industrial cooling across different industries in Lebanon and the United Arab Emirates.

During the last four and a half years, Salah’s work at AUBMC included coordination with different EHSRM units and working closely with different departments at AUBMC to resolve safety issues. Salah helped AUBMC maintain the different accreditations over the years through review of safety requirements and insuring compliance with safety regulations.