From Scratch to the Establishment of the Center of Excellence for Training of Biosafety and Biosecurity in Pakistan: Things Can Be Done

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Dow Diagnostic Reference and Research Laboratory
Dow University of Health Sciences

- Established in 2007, working on No Profit No Loss basis in public sector.
- Provide reliable, high quality diagnostic services at very economical rates.
- ISO 15189 accredited.
- Recognized by (CAP) 89764-25-01.
2013
Laboratory Biosafety for Handling Emerging Infections

- In spite of greater awareness of safety and containment procedures, the handling of pathogenic viruses remains a likely source of infection among laboratory workers.

- There is a steady increase in both the number of laboratories and scientists handling emerging infections for diagnostics and research.

- The risk associated with working with these infectious agents can be minimized through the application of sound biosafety concepts and practices.
Even with all the sophisticated SOPs many safety and security incidents occurred over the past years at so-called advanced facilities.

This indicates that the conventional biosafety and biosecurity systems alone are not sufficient.
Gaining knowledge and getting trained
Disseminating Knowledge and trainings
Training workshop on bio-safety, bio-security held

Staff Report

KARACHI: Dow Center of Excellence (COE), Dow University of Health Sciences, in collaboration with Health Security Partners (USA) organized hands-on training workshop on Biosafety and Biosecurity at Ojha Campus.

The aim of the workshop was to introduce the clinical laboratory workers to basic concepts and principles of biosafety and biosecurity - a neglected but crucial aspect of laboratory for laboratory workers.

During the workshop hands-on training was given to the participants belonging to different laboratories from Karachi and Hyderabad including Dow Diagnostic Reference and Research laboratory, Indus Hospital laboratory, Liaquat National Hospital, Chughtai Lab, Jinnah Post Graduate Medical Center, Dr. Punjwani Center for Molecular Medicine and Drug Research, Liaquat University of Health and Medical Science (LUMS), Jinnah Hospital etc.

Dr. Saeed Khan, Associate Professor and Biosafety Professional and Master Trainer, delivered an informative and interactive lecture on "Introduction to Laboratory Biosafety and Biosecurity".

Then hands on training was given to the participants on proper Donning and Doffing of Personal Protective Equipment, Spill Management, and response to Needle stick Injury and eye splash in which each of the participant was presented with real-time scenarios and trained to manage the incident during the bench work in laboratory.

DUHS organises Chikungunya awareness session

Karachi 12HOURS AGO BY PPI

Dow Centre of Excellence, Dow University of Health Sciences (DUHS) and Health Security Partners (HSP) jointly organised an informative CME session on Chikungunya and a workshop on “Biological Waste Management and Disposal for Clinical and Research Laboratories” on Tuesday at Ojha Campus.

The event was a joint venture of Dow Center of Excellence (COE) for Biosafety and Biosecurity and Health Security Partners, USA. The objective of the CME was to increase the understating of laboratory staff and doctors about Chikungunya infection and its prevention.

During the CME session, Dr. Saeed Khan PhD, Associate Professor and Additional Director of DDRRL delivered a very informative lecture on “Chikungunya Virus”. He explained the source of infection, symptoms, treatment, prevention and control of this infection. He also highlighted the importance of health hygiene and protection from mosquito’s bite which was the main source of Chikungunya Virus infection.

The aim of this workshop and training was to enhance the skills of the healthcare workers how to manage and properly dispose the biological waste. Participants from well-reputed hospitals and universities including Dow Lab, Indus Hospital, Liaquat National Hospital, Jinnah Hospital, Liaquat University of Jamshoro, Chughtai Laboratory, Memon Hospital, Hamdard University, University of Karachi and other institutions attended this event.

During the session, Prof Dr. Rana Qamar, Prof Dr. Shaheen Sharafat and Dr. Yahya Noori also shared their views about this event.
Participated in a 4-days workshop on "Workshop on Preparing Biological Laboratories for Certification in Biorisk Management"
We also trained our housekeeping staff!!!
Housekeeping staff giving presentation on proper waste management
Encouraging and supporting the workforce

From Housekeeping staff to a Nurse
To provide training in Biosafety and Biosecurity to the staff, students and faculty members of our own university as well as those of other institutions, the Center of Excellence for Biosafety and Biosecurity (HSP-DUHS CoE) has been developed in collaboration with Health Security Partners (HSP) in collaboration with HSP.

The CoE program supports the growth of organizations in Pakistan which are building local capacity in Biosafety and Biosecurity. As a CoE program participant, DUHS will offer local scientists, funding and logistical support to conduct the DUHS CoE program and technical support for a series of workshops on Biosafety and Biosecurity for scientists and students in Pakistan in 2016-2017.

Sincerely,

[Signature]

[Name]

Board Chair, Health Security Partners

[Date]

Dr. Shehzad Khan

Dean, College of Health Sciences

[University Name]

[City]

July 1, 2016

[Health Security Partners]

[Address]
Re-Emerging Infectious Diseases

Speaker:

Dr. Natasha Griffith

of High Containment Facilities, UCLA (USA)

Jointly Organized

Center of Excellence (CoE) for Emerging and Re-Emerging Infectious Diseases

Dow University of Health Sciences and Health

Library Block

Date: 15th

Time: 9:30 AM
We carried out survey in lab regarding the awareness of biosafety practices before and after each training
Methodology

Baseline survey based on questionnaire were filled by the laboratory personals in 2013.

After survey we conducted workshop/lectures on Biosafety and Biosecurity.

We conducted another survey in 2014 to check the level of awareness and impact of workshop and lectures.

Continues sessions of drills, CME/lectures, and hands on training regarding biosafety and biosecurity.

Recent study of the biosafety practices among lab staff was conducted in 2015.

We compare all the survey results.
Results

**Biosafety levels**
- 2013: 32%
- 2014: 72%
- 2015: 80.9%

**Management of Hazardous Waste**
- 2013: 32%
- 2014: 64%
- 2015: 71%
Results

Biosafety Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident Reporting</td>
<td>40%</td>
<td>80%</td>
<td>95%</td>
</tr>
<tr>
<td>Proper Disinfection</td>
<td>52%</td>
<td>65%</td>
<td>85%</td>
</tr>
<tr>
<td>Usage of PPE</td>
<td>48%</td>
<td>76%</td>
<td>86%</td>
</tr>
<tr>
<td>Hand Hygiene</td>
<td>52%</td>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
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Conclusion

• Significant changes in awareness level and attitude of the employees were observed after each training.
• Continuous and frequent workshops and trainings improved the quality of biosafety practices among the lab personals.
• This is the first step towards the implementation of Biorisk management system in our institution.
• Bringing Change in biosafety culture in collaboration with the Health Security Partners (HSP) and with the support of PBSA, FIC NIH and other local and international partners.
• Things can be done even with limited resources.
Acknowledgment

• DUHS
• HSP
• PBSA
• FIC NIH
• All Team Members
Thank you

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