RISK ASSESSMENT AND MITIGATION AT THE CENTRAL VETERINARY LAB IN IRAQ

OCTOBER 23, 2013

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BACKGROUND

Iraqi Biorisk Management Advisor Development and Mentorship Program - “Twinning” Project

• Partnership between:
  • U.S. Department of State
  • Sandia National Laboratories
  • Iraqi Central Veterinary Laboratory
  • Experienced Credentialed Biosafety Officers and Professional Network

• Education
• Problem-solving
• Networking
BENEFITS

Mentor

• Experience biorisk management implementation outside Western biosafety and biosecurity culture

Twin

• Access to biosafety professionals and their network
“Twins” were chosen and paired together

2 individuals from the Central Veterinary Laboratory in Baghdad, Iraq

3 credentialed biosafety professionals from Colorado State University, USA
FIRST STEP - "TWINS" MEET IN ANTALYA, TURKEY

- 16 ‘twins’
  - Algeria
  - Canada
  - England
  - India
  - Iraq
  - United States
  - Yemen
- Orientation
- Biorisk management training
- Gap analysis
- Created project plan
GAP ANALYSIS

- Waste management
  - Chemical
- Inventory control/ sample submission
- Emergency Response / Incident Reporting
PROJECT PLANNING

- Planning
  - Identified critical path
  - Identified deliverables
  - Assigned due dates to tasks
  - Identified project risks
    - Probability of risk event occurring
    - Impact of occurrence
- Initiated tasks
- Continuously assessed project status
  - Time
  - Cost
  - Scope
  - Resources
  - Quality
- Re-evaluated when needed
PLANNING PROCESS

• Goals

1. Form Biorisk Management Committee
   a. Obtain permission from the CVL Director
   b. Requested individuals who had previous training in Biosafety and Biosecurity
   c. Decide meeting schedule

2. Perform a biorisk management perception survey of all CVL employees
   a. Survey developed by Sandia National Laboratories
PLANNING PROCESS

• Goals

3. Establish methods for chemical waste disposal
   a. Obtain permission from the Veterinary Directorate General Manager to provide U.S. ‘twins’ with the names of chemicals expired and chemical waste generated.
PLANNING PROCESS

• Developed a timeline to complete goals
  1. 3 weeks → 1 month
  2. 6 months → 1 year and 1 month
  3. Extra Goal → 9 months

• Scheduled conference calls
  • Every 2 weeks
Iraqi ‘twins’, Dr. Majida Abdullah and Dr. Layth Aboulrasool, received approval from CVL Director

- Formed Biorisk Management Committee
- Provided list of chemical wastes generated from diagnostic assays to U.S. ‘twins’

CVL Biorisk Management Committee was formed

- Dr. Majida Abdullah - Chairperson of Biorisk Management Committee

Biorisk Management Perception Survey (developed by Sandia National Laboratories) administered by the CVL Biorisk Committee
BIORISK MANAGEMENT
PERCEPTION SURVEY CATEGORIES

- Policy & General Management - 8
  - Policy
  - Roles and Responsibilities
  - Targets and Objective

- Planning and Assessment - 9
  - Hazard ID / Inventory
  - Risk Assessment
  - Work Program ID
  - Personnel Needs
  - Legal Requirements
  - Emergency Plans

- Administrative Controls - 13
  - Personnel Screening
  - Competence / Assurance Training
  - Work Approval
  - Access Determination
  - Continuity and Contingency
  - Health Screening and Monitoring
  - Communication and Cooperation
BIORISK MANAGEMENT
PERCEPTION SURVEY CATEGORIES

• Operational controls- 22
  • Facility
  • Engineering Controls
  • Work Practices / SOPs
  • PPE
  • Security
  • Decontamination and Disposal
  • Transport and Shipping

• Reporting, Monitoring- 14
  • Incident Definition
  • Incident Reporting
  • Incident Investigation
  • Establish Performance Metrics
  • Review Performance Metrics
  • Competence Review
  • Drills, etc.
  • Corrective Action
  • Preventive Action

• Review and Revision- 4
  • Review policy and management objectives
  • Review plans and assignments
  • Make appropriate adjustments
  • Communicate revisions

DEVELOPED BY SANDIA NATIONAL LABORATORIES
BIORISK MANAGEMENT
PERCEPTION SURVEY

• 2 groups surveyed:
  • 15 CVL Heads of Units
  • 45 CVL Lab Workers

• Assigned values 1-5 for responses
  • 1=Don’t know
  • 2= No
  • 3=Needs Work
  • 4=Neutral
  • 5= Mostly in Place
  • 6= Yes

• Determined average response for each category

• Performed t-test to test for significant differences between perceptions of the 2 groups using SAS® analytic software

DEVELOPED BY SANDIA NATIONAL LABORATORIES
RESULTS OF PERCEPTION SURVEY

There were no significant differences in perceptions of CVL Heads of Units vs. CVL Lab Workers when the responses were pooled in a category.
RESULTS OF PERCEPTION SURVEY

• CVL Heads and Lab Workers perceived that these categories were adequate
  • Policy & General Management
  • Reporting & Monitoring
  • Operations Controls
  • Review & Revision
RESULTS OF PERCEPTION SURVEY

• Both CVL Heads and Lab Workers perceived that these categories could be improved:
  • Planning & Assessment
  • Administrative Control
ACCOMPLISHMENTS

• Development of Biorisk Management Committee for CVL
  • Results of Perception Survey provided CVL Biorisk Management Committee objectives
• Spill Clean Up Kits and Spill Clean Up Procedures for Chemical and Biological material
• Sharing of forms, documents, SOPs, signs, stickers…
• One on one meeting and tour with CSU Chemical Management Officers and Veolia Environmental Services, USA
VISIT TO COLORADO STATE

• Dr. Majida Abdullah, Dr. Layth Aboulrasool, and Dr. Nabil Al Fosail (Yemen), visited Colorado State University (CSU) for 4 days and toured:
  • The CSU Diagnostic Medical Center
  • The CSU Veterinary Teaching Hospital
  • The State of Colorado Rocky Mountain Regional Animal Health Laboratory in Denver
VISIT TO COLORADO STATE

- CSU Chemical Management Officers examined CVL chemical/waste list and made recommendations for neutralization and disposal.
OVERALL - WHAT WORKED AND CHALLENGES TO OVERCOME

Worked

• Meetings every 2 weeks - kept focus
• Plan and timeline
• Limited goals

Challenges

• Government regulations/procedures
  • Differences in ability to make decisions; permissions
• Skype
• Communication/ language barrier
  • Survey participants; roles
  • Survey provided in English only
• Time constraints
  • Both groups working full time with regular duties
ACKNOWLEDGEMENTS

U.S. State Department - Iraqi Scientist Engagement Program/ Biosecurity Engagement Program
Sandia National Laboratories
• Dr. Eric Cook*
• Dr. LouAnn Burnett*
• Anita Romera
• Dr. Jennifer Guadioso
• Sean Herring

Iraq Central Veterinary Laboratory Directors
• Dr. Salah F. Abbas, General Manager of Iraqi Veterinary Directorate
• Dr. Basem AL_Ahadh, Director of Iraqi CVL

Colorado State University
• Dr. Hana Van Campen, Diagnostic Medical Center
• Dr. Tawfik Aboellail, Diagnostic Medical Center
• Tiffany Brigner, Laboratory Director for the Rocky Mountain Regional Animal Health Laboratory
• Chris Giglio, CSU Chemical Management Officer
• Andy Borchert, CSU Chemical Management Officer
• Justin E. Robert, Veolia Environmental Services
• Dr. Ann Hess, CSU Statistician
SOURCES FOR PHOTOS

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QUESTIONS?