

RISK ASSESSMENT AND MITIGATION AT THE CENTRAL VETERINARY LAB IN IRAQ

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**CLAUDIA GENTRY-WEEKS¹, MAJIDA SAEED
ABDULLAH², LAYTH MOHAMMED SALIH
ABDULRASOOL², ROBERT ELLIS¹, HEATHER
BLAIR¹**



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



BACKGROUND

- **“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**

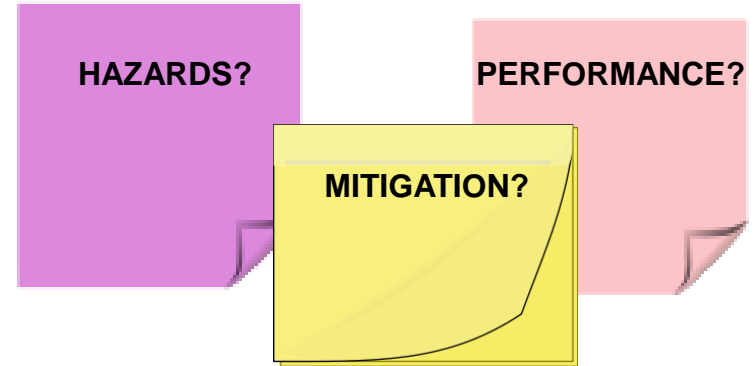


GAP ANALYSIS

- **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

ACCOMPLISHMENTS

- **Iraqi ‘twins’, Dr. Majida Abdullah and Dr. Layth Aboullasool, 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

- **Review and Revision- 4**

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

- **Reporting, Monitoring- 14**

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

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**

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

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- **Anita Romera**
- **Dr. Jennifer Guadoso**
- **Sean Herring**

Iraq Central Veterinary Laboratory Directors

- **Dr. Salah F. Abbas, General Manager of Iraqi Veterinary Directorate**
- **Dr. Basem AL_Adhadh, 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?

