National Center for Foreign Animal and Zoonotic Disease Defense (FAZD Center)

Task Verification Survey: Global Public and Animal Health Protection and Defense

Report Submitted by

Center on Education and Training for Employment,

College of Education and Human Ecology

The Ohio State University

August 17, 2011

OVERVIEW

This report summarizes an online verification survey regarding the practice domain of Global Public and Animal Health Protection and Defense. The survey aimed to verify an occupational analysis conducted during August 2010. The National Center for Foreign Animal and Zoonotic Disease Defense (FAZD Center), headquartered at Texas A&M University was the project sponsor; the Center on Education and Training for Employment (CETE) of The Ohio State University was the contractor. The survey was announced using targeted invitations from two email lists provided by the sponsor, one for the Centers for Disease Control and Prevention (CDC) and another for the Department of Homeland Security (DHS). An invitation was posted at the FAZD Center website, as well.

When conducting an occupational analysis, it is important to obtain input from a larger sample of practicing individuals. This survey requested practitioner judgments of importance and frequency on 143 tasks comprising eight duties that had been developed by a small workgroup. The rationale behind verification is to evaluate the initially-defined domain of practice to support various education and training products, including DACUM task analysis, curriculum development, and creation of examination specifications for formative and summative assessment. The purpose of this report is to describe the method and data analysis used for the verification survey. CETE findings and conclusions should always be reviewed by the sponsor and by experienced practitioners. The verification survey was posted by CETE staff using the SurveyMonkey tool with task statements provided by the client. The survey was posted in mid-May 2011 and closed in July 2011. The survey was presented in a single order and did represent a substantial time commitment on the part of practitioners.

PRACTICE DOMAIN VERIFICATION SURVEY

The domain of practice (body of tasks-knowledge-skills) is what individuals in the occupation do and what they need to do it. Put another way, it specifies the features of both the practice (work) and the practitioner (person). It is the foundation for knowledge management and credentialing (Rops, 2002). For this project, the sponsor FAZD Center contracted with CETE to conduct the original occupational analysis ("Developing A CUrriculuM" or DACUM; www.dacumohiostate.com) and this follow-up activity: the online verification. CETE staff first facilitated a workshop on August 25-26, 2010 to create the DACUM research chart with duties and tasks, and then handed the tasks off to the Assessment Services unit for the online verification process. Those duty and task statements formed the bulk of the survey. The original panel is listed with their affiliations in the table below. Dr. Heather Simmons, DVM, MSVPH and Ms. Jennifer Rinderknecht, MPH served as observer and recorder, respectively. Following the two-day

workshop, panelists reviewed the chart and made suggestions for minor revisions after which the chart was handed off for the verification process.

DACUM Panel Members with Affiliations			
Michelle Colby, DVM	Branch Chief		Member
	DHS S&T Chem/Bio Division	Washington, DC	
Paul Gibbs, PhD, FRCVS	Assoc. Dean for Students & Instruction		Member
	College of Veterinary Medicine University of Florida	Gainesville, FL	
Michael Gilsdorf, DVM	Executive Vice President		Member
	National Association of Federal Veterinarians	Washington, DC	
Hugh Mainzer, MS, DVM, DACVPM	Chief Veterinary Officer-USPHS		Member
	National Center for Environmental Health, Center for Disease Control & Prevention	Atlanta, GA	
Suelee Robbe-Austerman, DVM, PhD	Veterinary Medical Officer		Member
	National Veterinary Services Laboratories, USDA-APHIS	Ames, IA	
Paul Williams, DVM	Director for Agriculture, Food, & Veterinary Programs		Member
	Terrorism Emergency Response & Preparedness Division	Atlanta, GA	
Heather Simmons, DVM, MSVPH	Education & Outreach Theme Leader		Observer
	FAZD Center	College Station, TX	
Jennifer Rinderknecht, MPH	Research Assistant		Recorder
	FAZD Center	College Station, TX	
John Moser	CETE / Ohio State University	Columbus, OH	DACUM Facilitator

The online verification survey provided an introduction and first asked a set of background questions in order to describe the sample of respondents who provided the task ratings. Specific questions and response formats are listed in the table below. The questions concerned: 1) whether the individual had served on the original DACUM panel, 2) specialization area, 3) length of time working in role, 4) highest educational level, 5) respondent–provided credentials (up to four), and several other questions of interest. Frequency counts for the response levels are presented in the appendix. *CETE staff believes that the sponsor FAZD Center must determine if the sample is representative as they understand the population. Further, it will be noted later that the response rate is low.*

Background Variables [Item Format]
Were you a member of the original panel that developed this duty-task listing? [Y-N]
Vet Medicine / Public Health / Emergency Response / Laboratory Diagnostics-Research ["Mark any that apply"]
How long have you worked in this field (foreign and zoonotic disease)? [Year categories]
What is your highest educational degree? [List select]
Credential #1 [Open-ended fill in]
Credential #2 [Open-ended fill in]
Credential #3 [Open-ended fill in]
Credential #4 [Open-ended fill in]
Knowledge of Homeland Security Exercise and Evaluation Program (HSEEP) [4-point rating]
Knowledge of Incident Command System (ICS) [4-point rating]
Knowledge of National Incident Management System (NIMS) [4-point rating]
Which state do you represent? [List select]
Optionally, what is your gender? [M-F-?]
Optionally, what is your ethnicity? [List select]

Tasks

One hundred forty-three (143) tasks were written at the DACUM workshop to cover the practice domain of Global Public and Animal Health Protection and Defense. Tasks were generated at the August 2010 workshop for eight broad duties or areas of responsibility (A-H) that are listed below. Each task was rated on two dimensions. The first rating requested was frequency of task performance represented in seven categories: *Not Performed, Performed Annually, Performed Quarterly, Performed Monthly, Performed Weekly, Performed Daily,* or *Performed as Needed*. If a task was performed (as indicated by ratings of frequency), respondents were asked to rate its Importance using five levels: *Not Important, Somewhat Important, Important, Very Important,* and *Extremely Important*. If a task was marked as not performed, ratings of importance were optional. Ratings of *Performed as Needed* were also segregated from the main analysis.

Duty	Duty Title	# Tasks
A	Administer Inter-sectoral Health Protection & Defense Policy	12
B	Manage Disease Prevention & Health Promotion Activities	27
C	Prepare for Incident Response	26
D	Detect & Diagnose Disease or Exposure	12
E	Manage Incident Response	22
F	Coordinate Incident Recovery	16
G	Implement Outreach & Professional Development	12
H	Conduct Research & Evaluation	16

Additional Ratings and Comments

In addition, each survey requested a direct ranking of the eight duties (A-H) in terms of importance. Comments were requested at various points in the survey. One set of comments followed each of the main rating sections to provide additional information to the project sponsor in the form of additional tasks. Another question asked for any overall comments that respondents wished to provide (five individuals provided a range of comments). Comments for specific rating sections included very few suggestions for additional tasks and suggestions for clarification (inter-sectoral, for example, was a term that was confusing to several respondents).

Survey Response Rates

As noted in the overview, the survey was active for approximately six weeks. A total of 52 individuals began the survey and 26 completed the survey for a completion rate of 45.2%. The response rate, however, is calculated as 26 divided by the total number of spreadsheet entries (two provided totaling 227 valid email addressed), which resulted in a value of .114. Although low, the lack of stakes for this practice analysis and its baseline nature combine to mitigate this problem although a larger sample size is generally preferred.

Criticality Calculations

The main data analysis for the survey consisted of criticality computations for each task. This variable is calculated at the individual respondent level and is a function of frequency and importance ratings. Criticality was weighted so that importance carried 70% and frequency carried 30% of the weighted composite. The criticality values for all duties over all possible respondents are provided in the table below.

The overall average (grand mean) for criticality across all tasks is 66.18 (SD=6.645), which provides a reference point for considering which tasks to keep and which to flag for deletion consideration. Specifically, this average score or an appropriate adjustment (i.e., using the standard error of the mean, which is 1.41) can be used in decision-making. As this is a survey intended for baseline-establishment, FAZD Center staff might choose to maintain tasks with low criticality based on their professional judgment.

Potential Uses

A variety of uses of the obtained data are possible, ranging from DACUM-based task analysis, guidance for curriculum development, or test blueprinting. Each is discussed briefly. Task analysis within the DACUM-SCID framework consists of drilling down into selected tasks, for example beginning with the three duties for which criticality was highest (specifically, Duties D, E, and F). Task analysis workshops pair 2-3 subject matter experts with a facilitator. The facilitator elicits information about nine elements using a spreadsheet to record SME input (task steps, decision cues, performance standards, errors, general or specific knowledge-skill required). Curriculum

development within an Instructional Systems Design framework emphasizes use of the criticality average to prioritize tasks for inclusion in lesson plans (higher criticality tasks should be addressed before lower ones); it is also possible to use frequency and importance averages separately to ensure that tasks with higher frequency and higher importance are addressed. Training could be prioritized by duty with the three most important duties developed first (Detect-Diagnose, Manage, and Coordinate Recovery) and followed by other duties as appropriate. Finally, another suggested use of the data provided in the tables of this report and in the associated spreadsheet is to create formative or summative test blueprints allocating items to duty-task combinations in line with their criticality. CETE staff members have used the criticality to create blueprints through a simple process of determining test length or item bank size, then summing criticality over all retained tasks (allowing for duty-based averages as well), and then multiplying the proportion of total criticality by the total number of desired items. The tests can be formative, for example within training to provide trainees with information about where they are with respect to the technical knowledge and skill implied in performance of the tasks, or they can be summative, for example when assigning final grades in training courses for accountability reporting.

Lastly, a potential limitation of the present analysis is omission of knowledge and skill concepts from the verification. In addition to general knowledge within the domain defined by the DACUM chart, depending on the occupation-profession providing input for the survey there are specific print and digital information sources which would be classified as knowledge areas using the terminology of the Occupational Information Network (O*NET). Likewise, training and repeated performance of these tasks results in skill according to the O*NET definition.

APPENDIXES

Spreadsheet Deliverable Tabs

Task Statements and Judged Frequency and Importance

Frequency Counts for Background Variables

Duty Statistics

Spreadsheet Deliverable Tabs

Raw Data (downloaded from SurveyMonkey as numeric responses)

Duties

Tasks

Background Variables

Panel Members with Affiliations

Task Statements with Descriptive Statistics for Criticality						
ID	TASK	N	MIN	MAX	M	SD
CA01	Examine societal trends in existing health protection policy (A-01)	19	38	80	52.79	12.39
CA02	Engage public & private stakeholders in policy process (A-02)	10	38	100	69.20	19.68
CA03	Identify legislative activities, judicial findings, & regulatory priorities (A-03)	11	33	95	58.64	19.80
CA04	Develop health protection & defense policies (e.g., interagency, agency) (A-04)	14	38	100	67.57	15.05
CA05	Assess potential unintended consequences of health protection & defense policies (A-05)	10	38	85	63.80	18.32
CA06	Perform cost/benefit analyses on policy & strategy (A-06)	15	33	80	50.73	13.33
CA07	Develop health protection & defense guidelines (A-07)	12	38	100	64.67	15.54
CA08	Develop a resource allocation plan (e.g., budget, personnel, appropriations) (A-08)	17	33	86	65.00	16.68
CA09	Implement health protection & defense policy (A-09)	12	52	100	81.58	14.84
CA10	Establish an inter-sectoral unified command (A-10)	8	52	80	64.25	11.12
CA11	Validate interoperability of policy implementation (A-11)	10	38	71	57.70	10.59
CA12	Revise health protection & defense policies (A-12)	9	38	80	58.78	12.84
CB01	Prioritize prevention strategies (B-01)	14	33	100	68.07	21.25
CB02	Track foreign animal, emerging & zoonotic disease activity (B-02)	21	53	100	87.05	12.63
CB03	Develop disease prevention & health promotion programs in response to new policies or disease situations (B-03)	5	66	90	73.80	9.31
CB04	Review comprehensive frameworks for health protection (B-04)	10	38	100	57.30	16.47
CB05	Conduct risk assessment to identify critical nodes (B-05)	10	38	80	53.10	12.69
CB06	Monitor animal, people, & product movement (B-06)	16	19	100	75.50	20.43
CB07	Control animal, people, & product movement (B-07)	12	19	100	77.33	23.91
CB08	Review risk data (B-08)	17	48	86	66.65	13.34
CB09	Prioritize critical nodes (B-09)	13	38	81	59.23	11.69
CB10	Develop risk management plan (B-10)	11	38	86	60.18	14.45
CB11	Review existing mitigation practices (B-11)	15	38	81	56.80	10.97
CB12	Identify protective health systems gaps (B-12)	15	47	85	65.00	11.45
CB13	Evaluate animal & public health infrastructure (B-13)	16	47	71	57.25	7.85
CB14	Identify population health vulnerabilities (B-14)	13	48	72	63.08	7.44
CB15	Conduct health surveillance (B-15)	18	52	100	83.22	14.75
CB16	Assess health profession workforce for competency & adequacy (B-16)	18	38	90	55.94	14.41
CB17	Monitor international disease control activities (B-17)	17	38	100	70.82	17.04
CB18	Participate in international disease control & health promotion organizations (e.g., WHO, OIE, FAO) (B-18)	10	38	100	73.20	20.16

Task Statements with Descriptive Statistics for Criticality						
ID	TASK	N	MIN	MAX	M	SD
CB19	Promote biosecurity & food security (B-19)	15	57	100	82.13	17.37
CB20	Inventory national & international health assessments information (e.g., NAHMS, Healthy People 2020) (B-20)	15	33	71	55.00	12.42
CB21	Promote preventive medicine programs (e.g., vaccines) (B-21)	16	47	100	82.88	14.80
CB22	Create health outcomes forecast program (e.g., visual analytics, visual assessment) (B-22)	11	19	86	54.36	19.03
CB23	Approve points of entry for animals/animal products (B-23)	11	52	86	67.55	11.58
CB24	Coordinate disease prevention or program activities with partner organizations (B-24)	14	52	100	74.00	16.27
CB25	Administer federal veterinary accreditation program (B-25)	15	33	100	57.87	19.45
CB26	Establish regionalization for disease risk (B-26)	10	19	85	57.10	20.28
CB27	Ensure security of select agents (B-27)	10	38	100	77.90	21.71
CC01	Assure diagnostic laboratory response capability (C-01)	17	52	100	73.41	15.32
CC02	Perform homeland security exercise & evaluation program (HSEEP) (C-02)	15	38	71	52.00	8.34
CC03	Develop incident response protocol, plans & responsibilities (e.g., LIMS, IDF) (C-03)	13	33	80	60.23	18.23
CC04	Identify new response technologies (C-04)	8	52	85	64.63	12.96
CC05	Identify incident response support information (e.g., meteorological, environmental quality, biological) (C-05)	11	19	80	52.91	16.53
CC06	Identify multidisciplinary incident responders (C-06)	11	47	85	60.55	12.95
CC07	Develop incident command team (C-07)	10	43	80	61.80	12.28
CC08	Credential participating incident responders (C-08)	13	19	85	57.77	16.18
CC09	Conduct proficiency testing on diagnostic lab (C-09)	16	52	90	67.25	11.20
CC10	Maintain incident response plans (e.g., annexes, playbooks, ESFs) (C-10)	14	52	100	60.43	14.36
CC11	Establish incident responder occupational safety & health training program (e.g., PPE, HazMat) (C-11)	12	38	80	57.83	10.73
CC12	Develop responder resiliency plan (e.g., family support, mental health support) (C-12)	11	38	85	58.36	16.81
CC13	Ensure adequacy of national stockpiles (e.g., vaccines, medical equipment, pharmaceuticals) (C-13)	18	52	100	73.33	12.98
CC14	Establish animal disposal plan (C-14)	11	38	100	63.18	16.90
CC15	Identify additional workforce needs & resources (C-15)	14	38	80	55.00	11.86
CC16	Implement continuity of operations plan (C-16)	10	52	100	64.80	16.56
CC17	Develop incident response scenarios & consequence models (C-17)	12	43	76	56.33	9.75
CC18	Develop legal framework for incident response (C-18)	10	38	80	52.90	12.42
CC19	Develop reachback capability for subject matter expertise (C-19)	11	33	86	59.73	15.56
CC20	Maintain emergency contracts (C-20)	16	52	100	63.56	16.58
CC21	Establish mutual aid collaborations (e.g., EMAC, local, international) (C-21)	14	33	85	53.36	17.39

Task Statements with Descriptive Statistics for Criticality						
ID	TASK	N	MIN	MAX	M	SD
CC22	Manage logistics & supplies for incident response (e.g., equipment, water, transportation) (C-22)	12	38	100	64.33	17.27
CC23	Standardize diagnostic tests (C-23)	9	38	80	59.78	13.79
CC24	Develop interactive incident response processes with stakeholders (e.g., podcasts, SMS messaging) (C-24)	10	33	95	54.90	16.81
CC25	Recognize sentinel events (e.g., volcanoes, oil spill) (C-25)	9	33	100	69.78	31.00
CC26	Establish diagnostic protocols for new/emerging disease conditions (C-26)	9	47	86	67.33	14.82
CD01	Develop field testing capabilities (D-01)	8	38	100	62.75	19.25
CD02	Review regulatory requirements for disease reporting (D-02)	14	38	80	58.36	11.97
CD03	Investigate abnormal clinical presentation (D-03)	6	67	100	86.50	14.54
CD04	Determine sampling frame (D-04)	7	52	71	63.43	8.62
CD05	Determine clinical sampling procedures (D-05)	9	52	90	64.56	14.20
CD06	Collect diagnostic samples (D-06)	8	52	100	82.00	16.55
CD07	Determine priority & optimal conditions for sample preservation & shipping (D-07)	9	52	85	65.11	12.33
CD08	Manage laboratory testing, workflow & reporting (D-08)	14	38	100	74.71	17.24
CD09	Correlate data from multiple diagnostic labs (e.g., human health, vet, environmental) (D-09)	14	47	100	76.29	16.05
CD10	Provide diagnosis (D-10)	9	66	100	88.22	12.68
CD11	Report diagnostic test results (D-11)	10	66	100	84.30	11.97
CD12	Maintain lab quality assurance program (D-12)	17	52	100	73.35	13.79
CE01	Recognize scope & magnitude of incident (E-01)	5	34	86	71.60	22.73
CE02	Activate emergency response plan (E-02)	2	52	80	66.00	19.80
CE03	Mobilize clinical health provider network (E-03)	4	47	100	67.75	22.87
CE04	Manage affected populations (e.g., isolate, vaccinate, treat) (E-04)	6	71	100	92.83	12.07
CE05	Establish movement control (e.g., travel restriction, quarantine, zoning) (E-05)	5	66	100	82.00	13.34
CE06	Establish surveillance within specified zones (E-06)	7	66	100	86.29	14.26
CE07	Mobilize stockpile resources (E-07)	6	61	85	71.17	8.98
CE08	Reduce or eliminate exposure to causal agent (E-08)	7	61	100	88.29	16.32
CE09	Determine origin of causal agent (e.g., intentional, accidental, natural) (E-09)	3	47	100	74.00	26.51
CE10	Implement epidemiological protocols (E-10)	5	57	86	72.00	10.39
CE11	Establish incidence response lowest political level (e.g., parish or county) (E-11)	5	47	80	61.40	12.38
CE12	Implement incident communications plan (E-12)	7	52	86	72.71	15.34
CE13	Initiate criminal/forensic investigations (E-13)	3	33	86	66.67	29.26

Task Statements with Descriptive Statistics for Criticality						
ID	TASK	N	MIN	MAX	M	SD
CE14	Implement animal disposal plan (E-14)	4	52	100	73.75	23.04
CE15	Assess impacted environmental or ecological systems (E-15)	5	61	86	68.60	10.11
CE16	Conduct cleaning & disinfection of affected premises (E-16)	4	86	100	93.00	8.08
CE17	Enhance surveillance outside zone (E-17)	9	57	100	79.33	15.43
CE18	Identify need for new diagnostic technologies (E-18)	4	61	86	70.00	11.58
CE19	Ensure responder safety & health (E-19)	9	52	100	84.00	18.21
CE20	Administer indemnity programs (E-20)	7	38	100	66.29	23.20
CE21	Coordinate volunteer activities (E-21)	7	33	100	72.14	24.17
CE22	Ensure culturally sensitive incident response (e.g., animal welfare, vaccines) (E-22)	8	38	86	55.38	17.64
CF01	Establish freedom from disease, infection & exposure (F-01)	5	75	100	92.20	11.37
CF02	Ensure decontamination of affected premises (F-02)	3	86	95	89.00	5.20
CF03	Conduct post-incidence surveillance (F-03)	5	47	100	80.00	21.30
CF04	Determine national/international requirements for resumption of trade & travel (F-04)	6	61	81	73.33	7.39
CF05	Deactivate emergency response centers (F-05)	5	47	85	65.40	15.95
CF06	Activate disaster field offices & disaster recovery centers (F-06)	2	47	52	49.50	3.54
CF07	Ensure animal/human welfare & well-being (F-07)	8	57	100	79.13	14.19
CF08	Provide life sustaining essentials (F-08)	7	61	100	82.29	18.50
CF09	Review & lift restrictions (F-09)	6	67	100	78.00	11.75
CF10	Conduct incident damage assessment (F-10)	8	47	100	70.75	17.32
CF11	Address environmental impact (F-11)	6	61	86	71.33	11.93
CF12	Communicate recovery activities with constituencies & participants (F-12)	9	61	100	78.44	12.50
CF13	Replenish stockpile inventories (F-13)	4	62	71	67.75	4.27
CF14	Assure responder post incident safety & health (F-14)	4	61	100	82.00	16.15
CF15	Ensure restoration of affected infrastructure (F-15)	6	57	86	71.00	10.33
CF16	Compile data for reports (e.g., after action, epidemiological) (F-16)	8	48	86	65.50	12.91
CG01	Conduct stakeholder awareness training (G-01)	14	38	86	61.29	11.94
CG02	Develop incident communications plan (G-02)	14	38	100	64.50	15.53
CG03	Coordinate development of proactive outreach process (e.g., fact sheets, IT infrastructure, comm networks) (G-03)	16	38	100	60.75	18.23
CG04	Train PAHPD professionals in journalistic methods (G-04)	13	24	67	45.69	11.81
CG05	Develop multi-modal training programs (G-05)	14	33	80	53.14	14.38

Task Statements with Descriptive Statistics for Criticality						
ID	TASK	N	MIN	MAX	M	SD
CG06	Provide training for responders (e.g., just-in-time, job development) (G-06)	16	38	100	61.50	16.07
CG07	Improve multidisciplinary awareness of other response functions (G-07)	17	38	95	52.65	14.30
CG08	Identify outreach & development gaps & needs (G-08)	15	38	80	54.27	10.02
CG09	Develop list of SMEs for outreach & professional development (G-09)	13	38	71	51.77	11.33
CG10	Identify advocacy champions to assist in outreach (e.g., academic, industry, political) (G-10)	10	38	62	48.40	8.59
CG11	Participate in professional development events (e.g., conferences, online courses, exercises) (G-11)	16	38	72	54.19	10.69
CG12	Establish career development continuum (e.g., training, certification) (G-12)	13	38	66	56.00	8.28
CH01	Evaluate effectiveness of incident response (H-01)	5	52	85	65.20	13.92
CH02	Revise Emergency Response Plan (H-02)	10	38	85	61.40	14.68
CH03	Conduct research on diseases & agents of concern (H-03)	8	66	100	78.50	12.14
CH04	Conduct research on sociological response to incident (H-04)	9	38	76	55.89	14.33
CH05	Analyze effects of global commerce on disease movement (H-05)	9	38	86	61.56	14.77
CH06	Administer research programs (H-06)	8	52	86	67.63	15.56
CH07	Research effects of ecological change on disease transmission (H-07)	9	38	86	59.11	16.10
CH08	Research methods to improve interventions (H-08)	8	43	86	65.88	15.26
CH09	Establish requirements for new technologies (H-09)	11	38	86	62.18	13.83
CH10	Develop new technologies (e.g., diagnostics, vaccines, models) (H-10)	7	52	100	75.29	15.30
CH11	Create new decision support tools (H-11)	10	52	86	64.90	12.20
CH12	Establish processes to evaluate effectiveness of prevention, detection, response & recovery activities (H-12)	13	47	80	58.31	10.35
CH13	Develop after-action reports (H-13)	2	52	52	52.00	.00
CH14	Evaluate effectiveness of communication & outreach activities (H-14)	9	38	52	48.89	5.18
CH15	Evaluate effectiveness of current research (H-15)	10	48	80	62.30	10.81
CH16	Evaluate ethical & legal implications of response activities (H-16)	8	38	66	48.50	10.25

Frequency Counts for Survey Background Questions (Filtered Respondents)

Were you a member of the original panel that developed this duty-task listing?					
		#	%	Valid %	Cumulative %
Valid	1 No	20	87.0	87.0	87.0
	2 Yes	3	13.0	13.0	100.0
	Total	23	100.0	100.0	

Veterinary Medicine					
		#	%	Valid %	Cumulative %
Valid	1 (Yes)	14	60.9	100.0	100.0
Missing	System	9	39.1		
Total		23	100.0		

Public Health					
		#	%	Valid %	Cumulative %
Valid	1 (Yes)	1	4.3	16.7	16.7
	2 (No)	5	21.7	83.3	100.0
	Total	6	26.1	100.0	
Missing	System	17	73.9		
Total		23	100.0		

Emergency Response					
		#	%	Valid %	Cumulative %
Valid	1 (Yes)	1	4.3	33.3	33.3
	3	2	8.7	66.7	100.0
	Total	3	13.0	100.0	
Missing	System	20	87.0		
Total		23	100.0		

Laboratory Diagnostics and Research					
		#	%	Valid %	Cumulative %
Valid	4	8	34.8	100.0	100.0
Missing	System	15	65.2		
Total		23	100.0		

Other Specialization (please indicate)					
		#	%	Valid %	Cumulative %
Valid		18	78.3	78.3	78.3
	Extension	1	4.3	4.3	82.6
	Human health	1	4.3	4.3	87.0
	Microbiology	1	4.3	4.3	91.3
	Research on the ecology and control of arboviruses	1	4.3	4.3	95.7
	wildlife management	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

How long have you worked in this field (foreign and zoonotic disease)?					
		#	%	Valid %	Cumulative %
Valid	1 (<2 years)	2	8.7	8.7	8.7
	2 (2-5 years)	2	8.7	8.7	17.4
	3 (6-9 years)	3	13.0	13.0	30.4
	5 (14-17 years)	4	17.4	17.4	47.8
	6 (>17 years)	12	52.2	52.2	100.0
	Total	23	100.0	100.0	

What is your highest educational degree?					
		#	%	Valid %	Cumulative %
Valid	1 (Doctorate)	21	91.3	91.3	91.3
	2 (Masters)	1	4.3	4.3	95.7
	3 (Bachelors)	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

Credential #1					
		#	%	Valid %	Cumulative %
Valid		8	34.8	34.8	34.8
	Active License to practice VM in MA, MD, PA, and GA	1	4.3	4.3	39.1
	ARPAS	1	4.3	4.3	43.5
	DVM	8	34.8	34.8	78.3
	DVM License Wisconsin	1	4.3	4.3	82.6
	GA state veterinary license	1	4.3	4.3	87.0
	License to practice veterinary medicine two states	1	4.3	4.3	91.3
	PhD	1	4.3	4.3	95.7
	Texas Vet Med License	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

Credential #2					
		#	%	Valid %	Cumulative %
Valid		12	52.2	52.2	52.2
	ACAN	1	4.3	4.3	56.5
	Board certified in Vet Prev Med (ACVPM)	1	4.3	4.3	60.9
	Colorado Vet Med License	1	4.3	4.3	65.2
	Diplomate Amer College Veterinary Microbiology	1	4.3	4.3	69.6
	JD	1	4.3	4.3	73.9
	Masters of Preventive Veterinary Medicine	1	4.3	4.3	78.3
	MPH	1	4.3	4.3	82.6
	MS	1	4.3	4.3	87.0
	MS in Veterinary Epidemiology	1	4.3	4.3	91.3
	PhD	1	4.3	4.3	95.7
	PHD	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

Credential #3					
		#	%	Valid %	Cumulative %
Valid		15	65.2	65.2	65.2
	Board Certification in American College of Epidemiology	1	4.3	4.3	69.6
	Diplomate status, ACVM	1	4.3	4.3	73.9
	Diplomate, American College Veterinary Microbiologists	1	4.3	4.3	78.3
	Masters of Science in Vet Public Health	1	4.3	4.3	82.6
	Ph.D.	1	4.3	4.3	87.0
	PhD	2	8.7	8.7	95.7
	PhD in Comparative Biomedical Sciences (Epidemiology focus)	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

Credential #4					
		#	%	Valid %	Cumulative %
Valid		22	95.7	95.7	95.7
	Diplomate College of Vet Preventive Med	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

Experience with Homeland Security Exercise and Evaluation Program (HSEEP)					
		#	%	Valid %	Cumulative %
Valid	1 NO Experience	16	69.6	69.6	69.6
	2	4	17.4	17.4	87.0
	3 SOME Experience	3	13.0	13.0	100.0
	Total	23	100.0	100.0	

Experience with Incident Command System (ICS)					
		#	%	Valid %	Cumulative %
Valid	1 NO Experience	6	26.1	28.6	28.6
	2	6	26.1	28.6	57.1
	3	5	21.7	23.8	81.0
	4 EXTENSIVE Experience	4	17.4	19.0	100.0
	Total	21	91.3	100.0	
Missing	System	2	8.7		
Total		23	100.0		

Experience with National Incident Management System (NIMS)					
		#	%	Valid %	Cumulative %
Valid	1 NO Experience	9	39.1	40.9	40.9
	2	6	26.1	27.3	68.2
	3	5	21.7	22.7	90.9
	4 EXTENSIVE Experience	2	8.7	9.1	100.0
	Total	22	95.7	100.0	
Missing	System	1	4.3		
Total		23	100.0		

Which state do you represent?					
		#	%	Valid %	Cumulative %
Valid	3 (AZ)	1	4.3	4.3	4.3
	5 (CA)	2	8.7	8.7	13.0
	6 (CO)	1	4.3	4.3	17.4
	7 (CT)	1	4.3	4.3	21.7
	9 (DC)	1	4.3	4.3	26.1
	11 (GA)	3	13.0	13.0	39.1
	14 (IL)	1	4.3	4.3	43.5
	16 (IA)	5	21.7	21.7	65.2
	37 (OK)	1	4.3	4.3	69.6
	41 (SC)	1	4.3	4.3	73.9
	44 (TX)	4	17.4	17.4	91.3
	47 (VA)	1	4.3	4.3	95.7
	50 (WI)	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

Optionally, what is your gender?					
		Frequency	%	Valid %	Cumulative %
Valid	1 (M)	13	56.5	61.9	61.9
	2 (F)	8	34.8	38.1	100.0
	Total	21	91.3	100.0	
Missing	System	2	8.7		
Total		23	100.0		

Optionally, what is your ethnicity?					
		Frequency	%	Valid %	Cumulative %
Valid	3 (Caucasian	21	91.3	95.5	95.5
	4 (Hispanic)	1	4.3	4.5	100.0
	Total	22	95.7	100.0	
Missing	System	1	4.3		
Total		23	100.0		

Duty Statements and Average Ratings for Importance, Frequency, and Criticality (Filtered to Complete Respondents)

DUTY	DUTY TITLE	#	N	M-Imp	SD	N	M-Freq	SD	N	M-Crit	SD	M-Rank	SD
A	Administer Inter-Sectoral Health Protection & Defense Policy	12	22	3.443	.630	22	4.58	1.37	20	63.40	11.12	6.10	1.76
B	Manage Disease Prevention & Health Promotion Activities	27	23	3.494	.426	23	4.86	1.17	22	67.86	8.93	4.24	2.17
C	Prepare for Incident Response	26	23	3.410	.468	23	4.46	1.52	22	62.66	8.92	2.76	1.22
D	Detect & Diagnose Disease or Exposure	12	23	3.949	.747	23	5.43	1.31	19	73.98	11.58	1.76	1.09
E	Manage Incident Response	22	23	3.910	.721	23	6.31	.91	18	78.68	15.38	3.57	1.47
F	Coordinate Incident Recovery	16	22	3.798	.674	22	6.28	1.07	17	77.46	12.64	5.29	1.71
G	Implement Outreach & Professional Development	12	22	3.061	.503	22	3.91	1.61	21	55.92	10.16	6.24	1.92
H	Conduct Research & Evaluation	16	21	3.351	.545	21	5.26	1.48	17	60.90	10.35	5.00	2.41

M=Mean (Average), SD=Standard Deviation.