





















OBJECTIVE 2: ONE HEALTH WORKFORCE ASSESSMENT AND TRACKING

# One Health Workforce Resource Library, Competency Framework, and Evaluation Toolkit

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# **TABLE OF CONTENTS**

DEFINITIONS	5
INTRODUCTION	6
Need for OHW resource library, competency framework, and evaluation toolkit	
Objective of OHW resource library, competency framework, and evaluation toolkit	
Description of OHW resource library, competency framework, and evaluation toolkit.	
Acknowledgement	
BACKGROUND	8
Competency-based training and evaluation	8
METHODS	9
Backward Design approach to competency-based training and evaluation	10
Competency-based Workforce Assessment	11
Capability Maturity Model for Defining Proficiency at Four Levels	13
Kirkpatrick Model for Evaluating Training at Four Levels	14
Resource Mapping and Knowledge Management using Airtable	15
RESOURCE LIBRARY	18
Competency Resource Library	19
Competency Resources by Domain	19
Evaluation Resource Library	20
Evaluation Resources by Evaluation Level	22
COMPETENCY FRAMEWORK	23
Synthesized Competency Framework	24
Competencies by Domain	24
Competency Framework: Competencies by Proficiency Level in the Outbreak	
Investigation and Response Domain	27
Level 1 Evaluation: Reaction	30
Level 1 Evaluation Tool: Learner Satisfaction Questionnaire	30
Level 2 Evaluation: Learning	31
Level 2 Evaluation Tool: Self-Assessment of Knowledge and Skill Checklist	
Self-Assessment of Knowledge and Skills Checklist	
Level 3 Evaluation: Behavior	
Level 3 Evaluation Tool: Supervisor Direct Observation of Performance Checklist	
Level 4 Evaluation: Results	
Level 4 Evaluation Tool: Program Quality Checklist	

ANNEX	43
OHW Competency Framework with Proficiency Level Across all Domains	
OHW Evaluation Tool for Gender Domain Levels 1-4	72
Level 1: Reaction	72
Level 2: Learning	73
Level 3: Behavior	78
Outbreak Investigation and Response - Level II Knowledge Assessment	82
Outbreak Investigation and Response and One Health Level Three Behavior Assessment	ent 86
REFERENCES:	92

# **DEFINITIONS**

Competencies are a blend of tacit and explicit knowledge, behaviour and skills that gives someone the potential for effectiveness in task performance. Competencies allow individuals to function in an organizational setting, or when referred to as work readiness competencies, impact the success of individuals and organizations, and that can be improved by training and development. E.g. sets of competencies for analytical thinking, interpersonal skills, leadership, communication, system thinking and technical expertise in a particular area like One Health competencies to attain the organizational goals efficiently and effectively.

Competency proficiency assessment is a measurement that assigns an expected level of competence on a given competency. Leading practice scales have behavioral indicators as their building blocks with related behaviors organized under each competency. Scale ratings range from three to seven mastery levels, with five levels being the most common.

Competency tier level: Each competency requires number of layers of knowledge to integrate with the identified work assigned to the individual in the organization. Workplace competencies are needed in the knowledge economy to ensure their acquisition of skills as they progress through work tasks and job roles. Individuals progress through the levels of beginner, intermediate, advanced and expert as they gain further education, experience and application of specific job duties. Beginners are new entries to the field with minimal application of skill an experience while experts are leaders in the field with a wide variety of skills including organizational leadership and management.<sup>2</sup>

Competency management is the set of management practices that identify and optimize the skills and competencies required to deliver on an organization's business strategy. Competency management provides the foundation to develop strategic talent management practices such as workforce planning, acquiring top talent, and developing employees to optimize their strengths.

Competency-based framework (CBF) is a set of selected competencies of various domains for a specific discipline or organization needed to achieve professional results. CBF provides a shared understanding and common language of the necessary knowledge, behavior and skills needed to achieve organizational objectives, and the framework will be used to design and develop evaluation strategies/tools.<sup>3</sup>

Domain: Competencies grouped in a large set by the type/area of knowledge or skill involved. E.g. One health management, outbreak investigation and response, system thinking.<sup>4</sup>

Module: A set of separate parts that, when combined, form a complete whole. In a single class, a module is a chapter, class meeting or lecture on a specific topic. A domain may have different modules based on list of topics.<sup>5</sup>

<sup>1</sup> Sharma, P. (2017). Competence Development at the Workplace: a Conceptual framework. JK International Journal of Management and Social Science, 1(1). https://www.ikbschool.org/Chapter4.pdf

<sup>2</sup> National Institute of Health: Competencies Proficiency Scale. Available at: https://hr.nih.gov/working-nih/competencies/competencies-proficiency-scale

<sup>3</sup> Benayouny, A. (2017). Competency-Based Framework: The Benefits and the Challenges. International Journal of Management and Applied Science, 3(9), 6-11. http://www.iraj.in/journal/journal\_file/journal\_pdf/14-407-15115027096-11.pdf

<sup>4</sup> Competency-to-Curriculum Toolkit, Columbia University: http://www.phf.org/resourcestools/Documents/Competency\_to\_Curriculum\_Toolkit08.pdf

<sup>5</sup> Definition of Module: https://www.reference.com/world-view/module-education-24493465c954da62

# INTRODUCTION

# NEED FOR OHW RESOURCE LIBRARY, COMPETENCY FRAMEWORK, AND EVALUATION TOOLKIT

Competency frameworks are important to define what trainees need to know, understand, and be able to do. Training assessments are key to identify what trainees learn and determine if the training results in desired change. While there are a multitude of One Health Workforce trainings, some training manuals have not defined the competencies, and few to none according to level of proficiency. Many training manuals include an evaluation survey to measure learners' reaction to the training, some have included assessments to measure learning outcomes of knowledge, but few have tools to measure learners' behavior or results at the organizational or institutional level. There is a need to share lessons and synthesize resources across One Health Workforce training initiatives and to address gaps to enhance training quality and measure success.

# OBJECTIVE OF OHW RESOURCE LIBRARY, COMPETENCY FRAMEWORK, AND EVALUATION TOOLKIT

This manual was developed to promote competency-based training and evaluation for One Health Workforce by organizing current approaches, methodologies, and tools into a resource library and building a competency framework and assessment toolkit.

# DESCRIPTION OF OHW RESOURCE LIBRARY, COMPETENCY FRAMEWORK, AND EVALUATION TOOLKIT

This manual includes a resource library, competency framework, and assessment toolkit for One Health Workforce training programs. It builds on the abundance of expertise, experience, and resources developed by One Health Workforce training initiatives across 23 countries in Africa and Southeast Asia and around the globe. It includes theories, concepts, and methodologies for competency-based training and evaluation including the Backward Design, the Capability Maturity Model, and the Kirkpatrick four-level evaluation model.

The <u>resource library</u> includes a mapping of existing competency frameworks, training materials, and evaluation tools from One Health Workforce partners across 23 countries in Africa and Southeast Asia and external relevant materials. The resource library provides an organized global platform for searching, sharing, and accessing of resources, tools, best practices, and materials for One Health Workforce training and assessment.

The <u>competency framework</u> consists of competencies and sub-competencies organized across fifteen domains of One Health Workforce training and practice and defined at four levels of proficiency including beginner, intermediate, advanced, and expert. The competency framework provides guidance for defining what a One Health Workforce trained professional should know, understand, and be able to do.

The <u>evaluation toolkit</u> consists of methods and tools for evaluating One Health Workforce training and practice at four levels including reaction to training, learning outcomes, behavior and performance, and results at the organizational and institutional level. The assessment toolkit provides guidance, methods, and tools for determining the effect and quality of One Health Workforce training.

#### **ACKNOWLEDGEMENT**

We work to support competency-based training and evaluation to ensure high quality training that delivers results. We acknowledge the vast amount of work that has been done by One Health Workforce training initiatives globally, the value of a resource library for sharing lessons learned and materials across programs, and the utility of competency-frameworks and assessment methods and tools to address gaps in trainings. This manual is not a comprehensive guide but an overview of selected approaches and practical tools that we hope you may find useful to support your One Health Workforce training initiative.

# **BACKGROUND**

#### COMPETENCY-BASED TRAINING AND EVALUATION

Effective competency-based frameworks create a real-time and predictive inventory of the capability of any workforce. By defining required job roles and associated competency proficiency, leadership can readily identify strengths and skill gaps. Competency management then informs targeted skills development learning solutions improving individual and organizational performance, leading to better business results. These competencies are used to develop a competency framework that becomes an outline for learning development. The learning development may range from beginner through to expert/mastery for each of the competencies established in the framework structure.

A competency framework defines the knowledge, skills, and attributes needed for people within a profession or organization. Each role will have its own set of competencies required to perform a specific function effectively. Such a framework usually includes a number of competencies that are applied to multiple levels and occupational roles. Each competency statement defines, in generic terms, excellence in working behavior; this definition then establishes the benchmark against which individuals are assessed. A competency framework is a means by which institutions communicate in which behaviors or skills are required, valued, recognized and rewarded with respect to specific professional or occupational roles. The competency-based framework has the following expected key benefits:

- linking job requirement to organizational strategic goals,
- reduce the cost of training by identifying real training needs through identifying the competency gaps,
- providing a roadmap for employee development and career planning,
- providing a common understanding of the behaviors needed to achieve organizational objectives, and
- promoting employees based on performance rather than solely on seniority.

Competency framework includes domains, high-level competencies and sub-competencies, and functional competencies. Functional competencies are defined by duties and responsibilities assumed by individuals for a given task.



## **METHODS**

Four key theories and methods underly our approach to development of the OHW competency framework and assessment toolkit. The Backward Design approach guides development of competency-based learning and assessment. Competency based workforce assessment in professional development programs clears the path for more detailed and accurate workforce planning, certification, skill acquisition, deployment of changing healthcare needs, and many other purposes. The Capability Maturity Model informs the delineation of competencies according to level of proficiency from beginner, intermediate, advanced, to expert. And the Kirkpatrick evaluation model informs the assessment of training at four levels including learners' reaction, learning outcomes, behavioral performance, and results at the organizational level.

#### BACKWARD DESIGN APPROACH TO COMPETENCY-BASED TRAINING AND EVALUATION

The Backward Design (BD) approach is well-known for creating competency-based training, and is a compelling strategy for achieving results-based, participant-centered education program.<sup>6</sup> The BD approach defines the competencies needed to achieve organization's strategic goals, and, in the context of One Health, provides a vehicle for integrating the health needs of a country with the priorities of the profession. The three step backward design, as indicated in Fig 1, begins by first defining the desired competency or performance, secondly determining assessment and evaluation methods and measures, and third by developing the educational content. The competencies are the building blocks for high-quality individual and organizational performance and development of assessment strategies and tools. Competency evaluation is the foundation of competency management of workforce development. Thus, the BD approach will be used to develop a generic One Health education competency-based framework followed by competency assessment toolkits. This document addresses steps 1 and 2.



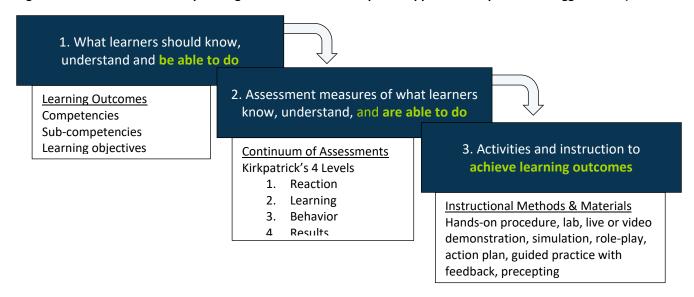


<sup>6</sup> Reynolds, H. L., & Kearns, K. D. (2017). A planning tool for incorporating backward design, active learning, and authentic assessment in the college classroom. College Teaching, 65(1), 17-27.

<sup>7</sup> Scoresby, J., Tkatchov, M., Hugus, E., & Marshall, H. (2018). Applying service design in competency-based curriculum development. The Journal of Competency-Based Education, 3(3), e01171.

The detailed steps of BD course planning are well depicted in Fig 2, which ICAP at Columbia University adapted from the Wiggins et al. (2005) model, from defining competencies to development of evaluation methods and contents. 8 The first stage of the model is also broken down into the sequence of identifying/developing competency statements, specifying sub-competencies for each competency statement (when needed) and then writing cognitive, behavioral and affective learning objectives for each competency or sub-competency statement. The second stage includes the development of assessments which provide evidence of skill acquisition and competency development. In this competency framework, Kirkpatrick's Four Levels of Evaluating Training Programs is specified for developing measures and evaluation methods. Evaluation is the crucial step of a competency-based training program because the competency assessments make up the participants' level of knowledge and skills and are the sole determiner of success. The third stage identifies the instructional methods and materials that will be used to achieve the learning outcomes. This includes various types of instructional delivery and activities such as hands-on procedures, demonstrations, lecture or guided practice. This manual addresses steps 1 and 2, determining learning outcomes and assessments.

Figure 2: Backward educational planning and curriculum development approach. Adapted from Wiggins et al. (200



### COMPETENCY-BASED WORKFORCE ASSESSMENT

Competency management is the entire process of assigning, assessing, and tracking the knowledge, skills, and experience required to perform specific activities. Institutions have an objective approach of ranking and evaluating trainees or employees against the training and learning that is being performed. Competency assessment in professional development programs clears the path for more detailed and accurate workforce planning, certification, skill acquisition, deployment of changing healthcare needs, and many other purposes (figure 3).

<sup>8</sup> Wiggins, G., Wiggins, G. P., & McTighe, J. (2005). Understanding by design. ASCD. Page 18.



Figure 3: Significance of competency management and evaluation

A competency-based workforce assessment supports growth at both the individual and organizational level. Organizations are able make better hiring decisions utilizing on competency-based screening tools, develop strategic employee training plans and identify targeted areas for continued training and education within their workforce. At the individual level, competency-based workforce assessments support employees have clear expectations for their roles, responsibilities, and deliverables, understand their areas of growth and focus their trainings to developed specific skills.9

Utilizing a competency-based workforce assessment tool will allow organizations such as AFROHUN and SEAOHUN to identify gaps in education and training programs that support the OH workforce. These assessments can be utilized to identify the areas where additional education is required including revising curriculum at the university level, short-term, targeted in-service training or continued professional development.

<sup>9</sup> National Institute of Health (2015). Workforce Planning Toolkit: Competencies Overview. Pgs. 3-7 https://hr.nih.gov/sites/default/files/public/documents/workforce/workforce-planning/pdf/07-nihcompetenciesoverview.pdf

#### CAPABILITY MATURITY MODEL FOR DEFINING PROFICIENCY AT FOUR LEVELS

The key OH competencies are categorized along a continuum from beginner to expert using capability maturity model, defining performance. Based on the complexity and level of responsibility, an average of three to five functional competencies is assigned under each task in the drafted OH competency framework, as shown below in Table 1. The functional competencies are further categorized using the capacity maturation model (CMM) from beginner to an expert level based on the level of education and experiences of skill acquisition.

Table 1: Capability Maturity Model for OHW

Proficiency tier level	Description of the competency staging levels 10111213
Beginner/ Novice	A beginner worker is one who can demonstrate an elementary level of performance and <u>focusing on developing understanding through on-the-job experience</u> . Beginners might have gained enough classroom or on-the-job training to note recurring principles and themes but might not yet be able to apply them consistently. The beginner worker might have sufficient subject matter knowledge but has limited experiential knowledge needed to perform a task, behavior, or function without frequent guidance or oversight.
Intermediate	An intermediate professional is one who has been in the same or similar job and who begins to see their actions within the context of the OH's long-range goals and plans and <u>focusing on enhancing knowledge or skill</u> . The intermediate OH professional is developing knowledge and experience to recognize a situation in terms of an overall picture or in terms of which aspects are most salient or most important. The intermediate worker has the necessary ability to cope with OH approaches and is able to perform a task, behavior, or function with a high degree of independence.
Advanced	Advanced OH professionals understand situations as a whole and perceive their meaning in terms of the OH long-term goals, and focusing on broader professional issues. The advanced person learns from experience or has taken intensive experiential training with practical application and knows how plans need to be modified in response to specific events. The advanced OH professional uses established principles to manage complex processes and has developed sufficient mastery to integrate or design a new task, behavior, or function.
Expert	The expert OH professional, with substantial experience and knowledge, has an intuitive grasp of situations and focuses on the root of the problem at a <u>strategic level</u> . The expert operates from a deep understanding of the total situation and integrates systems thinking, collaborative relationships, and the resources at their disposal to achieve the OH strategic goals. The expert has acquired mastery to design new strategies, policies, tasks, behaviors, and functions that support quality operations.

The stages of competency or skill of the maturation model (Figure 4) was used for developing the OH competency framework of the two domains which is designed and developed with the key functional competencies in Table 4. Following the development of the OH competency framework with the capability maturity model, the next step will be identifying existing assessment methods and tools that map to each competency and develop these where they are missing. These resources will be compiled into a toolkit, enabling educators and trainees to establish and

<sup>10</sup> Fisher, C., Cusack, G., Cox, K., Feigenbaum, K., & Wallen, G. R. (2016). Developing competency to sustain evidence-based practice. The Journal of nursing administration, 46(11), 581.

<sup>11</sup> Benner, P. (1984). From novice to expert. Menlo Park.

<sup>12</sup> Dreyfus SE, Dreyfus HL. A five-stage model of the mental activities involved in directed skill acquisition. Berkeley, CA: University of California–Berkeley; 1980.

<sup>13</sup> National Institute of Health: Competencies Proficiency Scale. Available at: https://hr.nih.gov/working-nih/competencies/competencies-proficiency-scale

document OH skills effectively. The generic OH competency framework and evaluation tools will benefit university networks and countries to use as a reference and adapt to the local settings, in consultation with national OH coordinating bodies, policymakers, professional associations, and/or licensing agencies.

**Limited Experience Start Practical Application Applied Theory** Recognized authority Broad professional issues Developing On-the-job Enhancing Strategic experience knowledge/skills Perform skills without Consistent excellence/ Understand terminology, •Perform skill, need help assistance mastery concepts & principles from expert **Expert** Advanced **Intermediate Beginner/ Novice** 

Figure 4: Stages of competency or skill of maturation model used for developing the OH competency framework

#### KIRKPATRICK MODEL FOR EVALUATING TRAINING AT FOUR LEVELS

Level-2

Level-1

The Kirkpatrick Model<sup>1415</sup> is well-recognized to design evaluation strategies for classroom training, e-learning, informal learning, social learning, or any other type of modality in which individuals gain knowledge or skills to do their jobs more effectively. This model will be used for developing/updating OH assessment strategies and tools (Fig 5). The Model consists of four hierarchical levels of evaluation. The most basic level, Level 1 (i.e., Reaction), assesses the degree to which training participants find the training program favorable, engaging, and relevant to their jobs. The next level, Level 2 (i.e. Learning) measures the extent to which participants acquire the intended knowledge, skills, attitude, confidence and commitment based on their participation in the training. Level 3 (i.e. Behavior) evaluates the degree to which participants can apply what they learned during the training when they are back at their jobs, so long as they are provided with the support they need. The highest level of evaluation, Level 4 (i.e. Results) assesses the degree to which targeted outcomes at organizations occur as a result of the training.

Level-3

Level-4

 $<sup>16\,</sup>IGWG,\,USAID,\,2017,\,Participant\,Evaluation\,Form,\,https://www.igwg.org/wp-content/uploads/2017/05/EvaluationForm.pdf$ 16 IGWG, USAID, 2017, Participant Evaluation Form, https://www.igwg.org/wp-content/uploads/2017/05/EvaluationForm.pdf

•Measure participants' reaction to understand training program & Level-1: valuable insights into material quality, facilitator, and more. Reaction •E.g. Post-training survey, interviews, oral feedback & others. Measure how much information was effectively absorbed from training, and Level-2: gauge the level of participants in developing knowledge, or mindset. Learning •E.g. Pre/post-test, paper, peer evaluation (group exercise), trainer observation. Measure how much training influenced participants behavior, and evaluate how they apply their Level-3: knowledge. Assessing changes in behavior. • E.g. Simulations (observation), Vignettes, supervisory **Behavior** monitoring, interview after self-assessment or exam, 360-degree feedback. •Measure and analyze the impact of training at organizational/business level, and be sure to tie it to the Level-4: individual or the program. Results •E.g. Field-based project, research project, use control group.

Figure 5: Kirkpatrick's Four Levels of Training Evaluation

#### RESOURCE MAPPING AND KNOWLEDGE MANAGEMENT USING AIRTABLE

Mapping and synthesis was conducted to identify existing resources and tools for OHW training and practice across 23 countries in Southeast Asia and Africa and external relevant materials. Identified resources were organized in a resource library where they are searchable by region, country, domain, competency category, evaluation method, and evaluation tool. Resources were then drawn upon and synthesized into guidance including a competency framework and an evaluation toolkit.

Online search engine and university websites were used to identify the existing OH related training materials, competencies, and evaluation resources. Resources were scanned not only from AFROHUN and SEAOHUN websites but also other institutions providing training or program related to the OH domains. Additional literature reviews were completed for each domain to augment the competencies with more targeted and detailed levels of skill acquisitions. An online database, Airtable, was used for organizing OH resources. Over two hundred resources were found and included in the Airtable and can be filtered, grouped, and sorted across various pre-defined categories

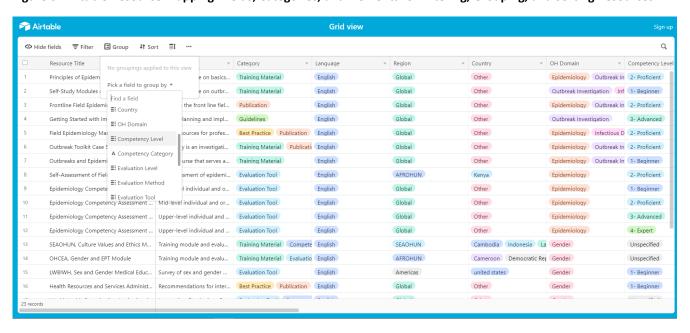
and fields including resource type (evaluation tool, competency framework), Region (AFROHUN, SEAOHUN, global), country, OH domain, competency level (1-4), evaluation level (1-4), evaluation method, evaluation tool, and more. The fields, categories, and pre-defined elements for filtering, grouping, and sorting resources are included in Table 2 below. The functions of Airtable filtering, grouping, and sorting can be viewed in Figure 6 below. The Airtable can be viewed online at the following link:

https://airtable.com/shrMRm1joz9HFBnok/tblcE8SJbH7wyq0dC

Table 2: Resource Mapping: Fields, Categories, and Elements for Searching, Grouping, and Filtering Resources

REGION	COUNTRY	OH DOMAIN	COMPETENCY LEVEL	EVALUATION LEVEL	EVALUATION METHOD	EVALUATION TOOL	TRAINING METHOD	TRAINING TOOL
SEAOHUN	Cambodia	Behavior Change	1-Beginner	1-Reaction	Satisfaction survey	Questionnaire	University Course	Curriculum
AFROHUN	Indonesia	Collaboration and Partnership	2-Proficient	2-Learning	Pre-post test	Multiple choice exam	Tutorial	Training Manual
Global	Laos	Communication	3-Advanced	3-Behavior	Self-assessment	Knowledge checklist	Field Experience	Online Course
	Malaysia	Culture and Ethics	4-Expert	4-Results	Group- assessment	Skills checklist	Workshop	Textbook
	Philippines	Ecosystems Health			Direct observation	Performance checklist	Seminar	Guideline
	Thailand	Epidemiology			Simulation Lab		Communities of Practice	Reference
	Vietnam	Gender			Field Assessment		Inservice Training	Applicatio n
	Myanmar	Infectious Disease			Performance Evaluation		Student Clubs	
	Cameroon	Outbreak Investigation			Quality Improvement		Simulations	
	DRC	Leadership			Monitoring and Evaluation		Certificates	
	Ethiopia	Management			Program Evaluation		Masters Degree	
	Kenya	Policy and Advocacy			Research Project		Doctoral Degree	
	Uganda	Research						
	Rwanda	Risk Analysis						
	Tanzania	Systems Thinking						
	Senegal							

Figure 6: Airtable Resource Mapping: Fields, Categories, and Elements for Filtering, Grouping, and Sorting Resources





# **RESOURCE LIBRARY**

#### COMPETENCY RESOURCE LIBRARY

Existing competency frameworks, categories, and statements were scanned for each OHW domain and compiled into a resource library in Airtable. Competency resources are categorized and searchable by domain, competency category, region, and country. Over two hundred resources were found across fifteen OHW domains. For example, in the gender domain, ten resources were identified including competency frameworks or statements related to gender and OHW. These resources were further categorized by competency categories within the gender domain including gender awareness, analysis, health education, healthcare, programs, and policy. The competency framework resources for the gender domain is highlighted as an example below in Table 3. The competency framework resources for the gender domain are shown in the Airtable resource library in Figure 7. To view all competency resources please visit the Airtable at the following link:

https://airtable.com/shrMRm1joz9HFBnok/tblcE8SJbH7wyq0dC

Scanning existing competency frameworks revealed that many training materials including OHCEA do not include explicit competency statements. Other training materials include competency statements but do not specify competency level (beginner, intermediate, advanced, expert). The scan revealed a need to define competencies for OHW and to provide more detailed sub-competencies according to competency level (beginner, intermediate, advanced, expert) to fill the gap in competency resources. The scan also revealed repeating competency themes and categories across resources so that we could begin to identify core competency categories to be included in the synthesized competency framework. The scan included OHW regional and country competencies as well as additional resources to provide a more comprehensive resource library of competencies to draw upon.

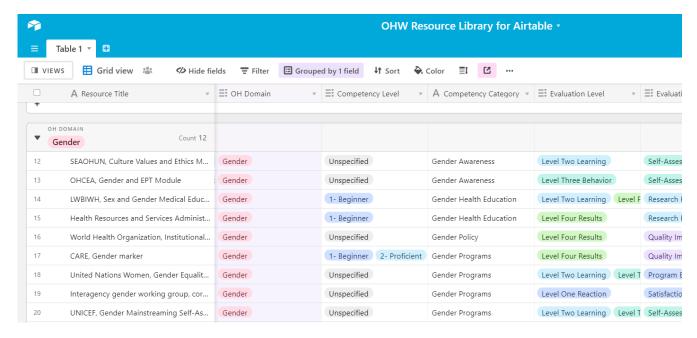
#### Competency Resources by Domain

Table 3: Example: Mapping Existing Competency Framework Resources by Gender Domain

RESOURCE	DOMAIN	COMPETENCY LEVEL	COMPETENCY CATEGORY
SEAHUN, Culture Values and Ethics Module	Gender	Unspecified	Gender Awareness
OHCEA, Gender and EPT Module	Gender	Unspecified	Gender Awareness
LWBIWH, Sex and Gender Medical Education National Student Survey	Gender	1-Beginner	Gender Health Education
Health Resources and Services Administration. Women's Health Curricula, Final Report on Expert Panel Recommendations for Interprofessional Education	Gender	1-Beginner	Gender Health Education
World Health Organization. Institutional Competency in Gender Integration	Gender	Unspecified	Gender Policy
CARE, Gender marker	Gender	1-Beginner, 2-Intermediate, 3-Advanced, 4-Expert	Gender program

RESOURCE	DOMAIN	COMPETENCY LEVEL	COMPETENCY CATEGORY
United Nations Women, Gender Equality Capacity Assessment Tool	Gender	Unspecified	Gender program
Interagency gender working group, core gender training	Gender	Unspecified	Gender program
UNICEF, Gender Mainstreaming Self-Assessment	Gender	Unspecified	Gender program
World Health Organization, Integrating Gender into the Curricula for Health Professionals	Gender	1-Beginner	Gender Health Education

Figure 7: Example Airtable: Mapping Existing Competency Framework Resources by Gender Domain



#### **EVALUATION RESOURCE LIBRARY**

Existing evaluation and assessment tools were scanned for each OHW domain and compiled in a resource library in Airtable. Evaluation resources were categorized and can be filtered, grouped, and sorted in Airtable according to evaluation level, evaluation method, OHW domain, competency category, region, and country. Over two hundred resources were found across fifteen OHW domains. To view all evaluation resources please visit the Airtable at the following link: <a href="https://airtable.com/shrMRm1joz9HFBnok/tblcE8SJbH7wyq0dC">https://airtable.com/shrMRm1joz9HFBnok/tblcE8SJbH7wyq0dC</a>

Scanning existing evaluation tools revealed that the majority of evaluation tools available related to OHW were available at Level 1: Reaction and Level 2: Learning. OHCEA and SEAOHUN include tools for measuring Levels 1 and 2 but not 3 and 4 of the Kirkpatrick evaluation method and this was common across most resources identified. Many training manuals include a learner satisfaction questionnaire to measure Level 1: Reaction and the majority of Level 2: Learning tools included self-assessment of learning using knowledge checklists and Likert scales. There was an

identified need for more objective measures of Level 2: Learning evaluation such as multiple choice pre/post tests. Fewer evaluation resources and tools were found to measure Level 3: Behavior or Level 4: Results. There was an identified need to develop approaches and tools to evaluate Level 3: Behavior through skills observations and Level 4: Results through program evaluation and quality improvement tools.

For example, the scan of existing or available assessment tools in the domain of Outbreak Investigation and Emergency Response (OIR) found certain tools at Level One Reaction and Level Two Knowledge. Many available educational packages had instructional foci on a singular outbreak event or disease and the available evaluations assessed participants' overall appraisal of the training or contained minimal knowledge assessments such as targeted case studies, short answers or multiple-choice questions. Individual performance-based assessments that could be aligned with the Level Three Behavior and Level Four Reaction evaluations were not found during the scan. Many of the OIR competencies and sub-competencies are performance and experience-based and will, therefore, require higher-level tools to evaluate skill acquisition and proficiency.

The scan of existing or available assessment tools in the domain of Gender and One Health found tools to evaluate all four levels of Kirkpatrick Evaluation model, including reaction, learning, behavior, and results. SEAOHUN and AFROHUN training materials on Gender included assessment tools for Kirkpatrick Levels 2 (Learning) and 3 (Behavior). The SEAOHUN assessment tool for Level 2, Learning, used self-report on a 5-point scale to assess learners' ability to understand and apply competencies after training. The AFROHUN assessment tool for Level 3, Behavior, used a simulation self-assessment and team-assessment tool to measure the behavioral performance of competencies after the training on a 5-point scale. Additional assessment tools were gathered during scanning to complement the existing SEAOHUN and AFROHUN assessment tools and to evaluate Levels 1-4 of the Kirkpatrick model. The IGWG, USAID, Participant Evaluation Form was identified during the scan as a useful assessment tool to evaluate Level 1, Reaction, using a 5-point scale and short answers to assess participants' satisfaction with the training on gender and to gather participant feedback. The PHF Competency Assessment Tool for Public Health Professionals was identified during the scan as a useful assessment tool for evaluating Level 2, Learning, using learners' self-report of knowledge and skill on a five-point scale. The Academic health council, Inter-professional collaborator assessment rubric was identified during the scan to evaluate Level 3, Behavior, by using direct observation of demonstrated competency based on frequency of behavior and independence of performance on a four-point scale. The CARE Gender Marker assessment tool was identified during the scan to evaluate Level 4, Results, by assessing organizational level results of integrating gender sensitivity into programs on a five-point scale. The WHO tool evaluates Level 4, Results, by assessing gender sensitive policies on a five-point scale. The HRSA tool for Integrating Gender into Health Professional Education was identified to evaluate Level 4, Results, by assessing Education Institution on a scale of 1-4 for Institutional Readiness for Inter-professional Sex and Gender Specific Women's Health Education. Existing evaluation tools from SEAOHUN and AFROHUN were synthesized together with additional assessment tools identified during the scanning and compiled into a comprehensive assessment tool for evaluating Gender and One Health on all four levels of Kirkpatrick Evaluation Model and is included in Annex 2.

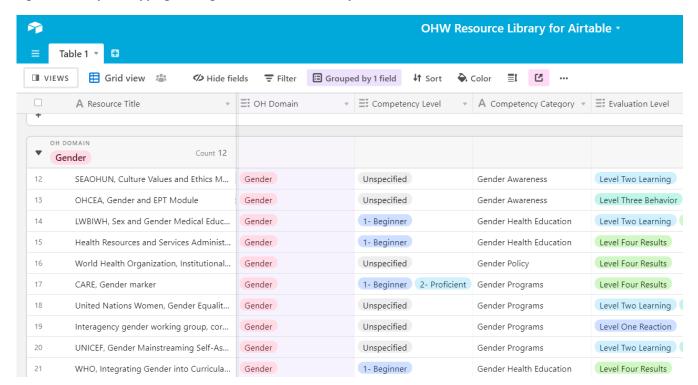
Below is a table showing the existing evaluation resources by Kirkpatrick evaluation levels across OHW domains (Table 4). The blue boxes indicate where resources were identified. As you can see, there is a lack of evaluation resources particularly in Levels 3 and 4 of the Kirkpatrick model. Below you can see a snapshot of the Airtable to see how the evaluation tools are categorized and can be filtered, grouped, and sorted by evaluation level (Figure 8). For full access to all two-hundred plus evaluation resources please visit the Airtable website at: https://airtable.com/shrMRm1joz9HFBnok/tblcE8SJbH7wyq0dC

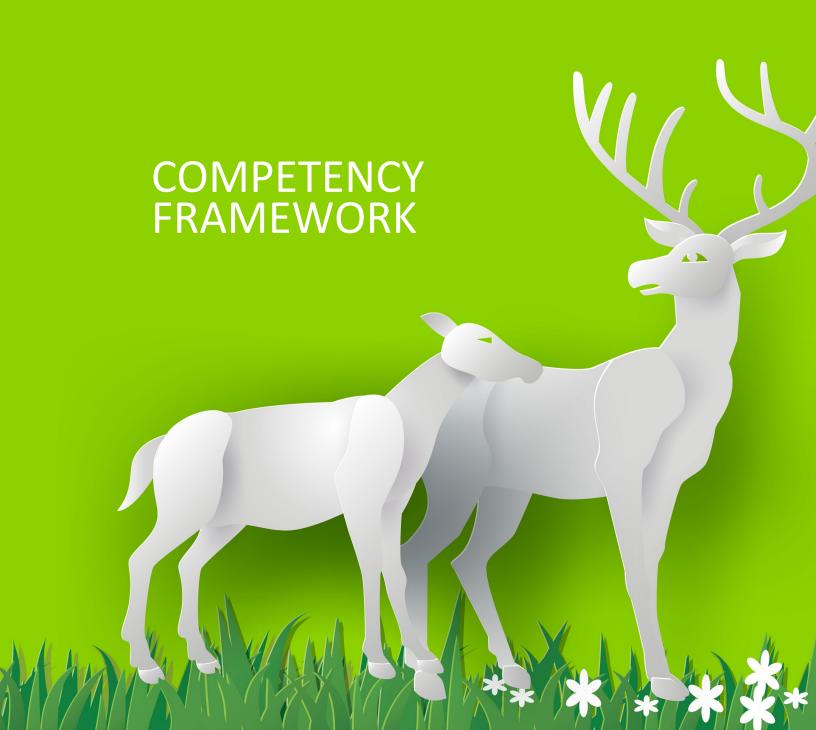
## **Evaluation Resources by Evaluation Level**

Table 4. Example: Mapping Existing Evaluation Resources by Evaluation Level

DOMAIN		EVALUATION LEVEL			
Gender	Level I	Level II	Level III	Level IV	
Culture, Values, and Ethics		Level II	Level III		
Policy and advocacy	Level I	Level II			
Leadership		Level II			
Management		Level II	Level III		
Systems Thinking	Level I	Level II			
Risk Assessment and Mitigation		Level II			
Ecosystems Health		Level II			
Infectious diseases Management		Level II			

Figure 8. Example: Mapping Existing Evaluation Resources by Evaluation Level





# **COMPETENCY FRAMEWORK**

#### SYNTHESIZED COMPETENCY FRAMEWORK

A competency framework including competencies and sub-competencies was synthesized and categorized across fifteen domains of OHW and defined according to proficiency level of beginner, intermediate, advanced, and expert. The OH competency framework is designed to show workflows and competency levels, driving the ability to review/design different types of evaluation strategies and tools linked to competency. The framework is a deep-dive into competency levels to identify gaps and all the resources required to close these gaps. The framework ties competencies and sub-competencies with evaluation strategies, and it is consolidated and provides a clear visual aid for identifying competency gaps. Based on competency gaps, institutions and/or users can review and/or develop a training package and integrate the framework with different competency management systems. Furthermore, the generic competency framework would be critical for workforce demand analysis and planning. It can also be a reference for executives to gain key insights into the OH competencies for different roles and skill requirements and create competency role profiles to meet organizational needs.

#### Competencies by Domain

The competency framework in Table 5 below includes key competencies listed across fifteen OHW domains including: outreak investigation and response, gender, culture values and ethics, policy and advocacy, leadership, management, systems thinking, risk assessment and mitigation, ecosystems health, communication, behavior change, infectious disease, research, collaboration and partnership, and public health principles. Each domain includes 3-8 key competency categories and competency statements. These competency categories were identified during the competency mapping and scanning stage and competency statements were derived and synthesized from existing competency frameworks and statements included in the resource library. This list of competency statements is not comprehensive or exhaustive but is to serve as an example library of what were found to be common and vital minimum competencies to be included in each domain. These competency statements may be adapted to different contexts and settings.

#### Table 5. Competency Framework: Competencies by Domain

#### **OUTBREAK INVESTIGATION AND RESPONSE**

Outbreak Investigation: Apply steps in conducting outbreak investigation

Outbreak Preparation: Review investigation and outbreak management experiences for applying best practices for potential outbreak events

Outbreak Response: Use systematic approach for outbreak response

Outbreak Recovery: Use systematic approach to recovery from outbreak and return to SOP

#### GENDER

Gender Awareness: Demonstrate awareness of gender dynamics in emerging pandemic threats

Gender Analysis: Evaluate how gender intersects with emerging pandemic threats

Gender Programs: Develop gender sensitive response plans and programs for emerging pandemic threats

#### **CULTURE, VALUES, AND ETHICS**

Culture and Beliefs: Demonstrate cultural competence in OH initiatives by identifying, interpreting and addressing local norms, wisdom, values, beliefs and culture about human, animal and environmental health.

Professionalism and Trust: Generate trust among the community in OH initiatives through actions based on the highest ethical, scientific, and professional standards, transparency, and accountability.

Health and Safety: Prevent, minimize, and mitigate health harms and promote and protect public safety, health, and well-being in OH initiatives.

Health Justice and Equity: Promote equitable distribution of resources and social conditions necessary to secure equal opportunities for the realization of health and other capabilities by individuals and communities served by OH initiatives.

Interdependence and Solidarity: Foster positive, and mitigate negative, relationships among individuals, societies, and environments via OH in ways that protect and promote the flourishing of humans, animals, and ecologies.

Human Rights and Civil Liberties: Promote respect for personal autonomy, self-determination, privacy, and the absence of discrimination and domination in its many interpersonal and institutional forms in all OH initiatives.

Inclusivity and Engagement: Include and engage diverse publics, communities, and stakeholders to ensure informed decision making and promote diversity within OH programs.

#### **POLICY AND ADVOCACY**

Political Process: Demonstrate Awareness of the Political Process and Roles in relation to OH

Policy Analysis: Analyze OH policy and identify the different challenges involved in development and implementation

Policy Development: Develop OH policy and conduct policy implementation

Organizing and Negotiation: Organize national and international stakeholders in negotiating for OH policy

Advocacy and Marketing: Utilize principles of social marketing and advocacy to communicate routinely with target audiences regarding OH needs, objectives, accomplishments, and critical information

Legislation and Regulation: Translate community and organizational analyses and plans into specific regulatory actions and legislative proposals for OH

#### **LEADERSHIP**

Shared Vision: Articulate a shared mission, set of core values, and vision to achieve OH goals.

Collaborative Solutions: Utilize collaborative methods and skills of negotiation and conflict management across sectors and disciplines to facilitate cooperation in working together to address challenges and achieve OH goals.

Team Commitment: Motivate, coach, mentor, and mobilize the OH team to work together to achieve OH goals.

Professionalism: Apply ethical principles and professional code of conduct in leadership of OH programs.

#### MANAGEMENT

**General Management:** Ensure sound management of OH operations

Program Management: Plan, Design, Implement, Monitor, and Evaluate OH Programs

Financial Management: ensure sound financial management of OH programs

Human Resource Management: ensures effective management of human resources for OH programs

Emergency Preparedness and Response Management: Ensure readiness to prepare and respond to emerging pandemic threats and outbreaks

#### SYSTEMS THINKING

Systems Thinking Principles: Describe the elements of complex problems and systems thinking.

Systems Thinking Diagrams: Create and use systems mapping to deepen understanding of One Health problems.

Systems Thinking Partnerships: Partner with One Health team members to develop solutions to complex One Health problems using systems thinking and tools.

#### RISK ASSESSMENT AND MITIGATION

Risk Assessment: Conduct One Health risk assessment and analysis

Risk Management: Implement One Health risk management and mitigation

Risk Reporting: Conduct One Health risk communication and reporting

#### **ECOSYSTEMS HEALTH**

Ecosystems Principles: Understand fundamental ecological/ecosystem principles

Ecosystems Relationships: Recognize interrelationships among ecosystems, animal health and human health

Ecosystems Impacts: Analyze the effects of direct impacts on the environment

#### **INFECTIOUS DISEASE MANAGEMENT**

Risk: Identify and analyze the risk factors associated with illness during an infectious disease outbreak or epidemic.

Management: Design and implement an infectious disease management plan.

Evaluation: Evaluate the effectiveness of One Health actions in infectious disease management.

Monitoring: Design a disease surveillance and monitoring system.

#### RESEARCH

Research Programs: develops research programs

Ethical Conduct: ensures the ethical and responsible conduct of research

Research Foundation: integrates scientific and technical knowledge for use as a foundation for research

Testing Methodology Development: develops new testing methodology

Research Project Execution: conducts research to address a public health issue or answer a public health question

Research Data Management, Analysis and Application: conducts research according to professional standards of data management,

analysis, and application

Dissemination of Research Findings: disseminates research findings Translation: translates research findings to public health practice

#### COMMUNICATION

Communication Techniques: deploys formal written and oral communication strategies

Active Listening Skills: displays active listening skills when interacting with others

Comprehension of Materials: demonstrates comprehension of written documents and directions

Communication Professionalism: ensures professionalism in communication with customers and stakeholders

Professional Reports: prepares professional written reports and oral presentations

Risk Communication: applies emergency and risk communication principles and techniques to explain information to targeted audiences

Media Relations: works with the media to provide information about public health laboratories and public health issues

#### **COLLABORATION AND PARTNERSHIP**

Inclusivity: Promote inclusion of representatives of diverse constituencies and disciplines

Shared Vision: Share vision, power, responsibility, and accountability among collaborators

Role Assessment: Use the knowledge of one's own role and those of other professions to appropriately assess and address the needs of the organization and populations served

Communication: Communicate with all stakeholders in a responsive and responsible manner that supports a team approach to the strengthening OH systems and to promote OH

#### **BEHAVIOR CHANGE**

Behavior Change Theories: Explain behavior change theories and change management concepts

Behavior Change Models: Adapt and apply models for individual behavior change to One Health contexts

Behavior Change Strategies: Design behavior change strategies for One Health interventions in communities

#### PRINCIPLES OF PUBLIC HEALTH

Public Health Analysis: Analyze factors of health that impact the health of the human, animal and environmental communities

Public Health Policies: Implement policies and programs in collaboration with governmental and community organizations to support One Health

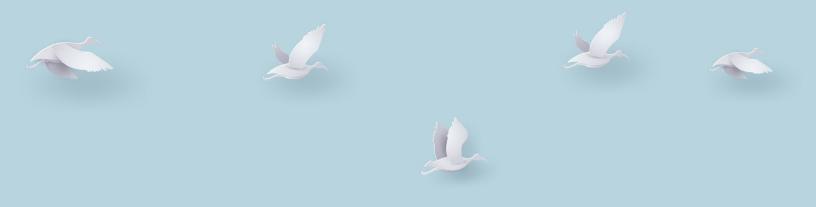
Public Health Programs: Engage communities in programs to improve OH systems

Competency Framework: Competencies by Proficiency Level in the Outbreak Investigation and Response Domain

Table 6. Competency Framework: Sub-Competencies by Proficiency Level in the Outbreak Investigation and Response **Domain** 

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT				
1. Outbreak Investigation: Apply steps in conducting outbreak investigation							
List sources of information that might be used to indicate unusual disease activity (clinicians, patients, surveillance data, media)	Gather information from various sources of disease reporting	Develop data collection tools to ensure accurate information collection from different sources	Evaluate the quality information from various sources of disease reporting				
Identify what constitutes an unusual occurrence of a disease and a potential outbreak	Utilize data from collected information to develop hypothesis on cause of outbreak	Test hypothesis on the cause of outbreak to determine the cause and develop descriptive features of the outbreak	Evaluate the hypothesis testing and determine a cause and descriptive features the outbreak				
Collect information to formulate the demographic and temporal description of the apparent outbreak	Utilize data from collected information to establish a case definition hypothesis	Test hypothesis to establish a case definition and develop descriptive features of a case definition	Evaluate hypothesis to establish a case definition and determine descriptive feature of a case				
List and describe the procedures for collecting, storing and transporting clinical and/or environmental samples	Collect clinical and environmental samples according to procedure	Develop collection procedures and determine clinical and environmental samples to be collected	Evaluate collection procures and determination of which clinical/environmental samples are collected				
Describes requirements for notification of outbreaks according to organizational/national plans and policies	Implements organizational plans and policies for notification of emergencies and/or outbreaks	Develops internal policies and procedures for notification of emergencies and/or outbreaks	Oversees the collaboration with stakeholders and agencies to develop and implement plans and policies for notification of emergencies and/or outbreaks				
2. Outbreak Preparation: Revie outbreak events	w investigation and outbreak mar	agement experiences for applying	g best practices for potential				
Explains the outbreak response plan and sustainability of Operations Plan	Assists with development and implementation of the outbreak response plan and sustainability of Operations Plan	Manages development and implementation of the outbreak response plan	Oversees outbreak response plan, including implementation of the sustainability of Operations Plan with external partners				
Participates in outbreak response training, exercises, and drills	Contributes to the development of outbreak response training, exercises, and drills	Conducts outbreak response training, exercises, and drills in collaboration with stakeholder agencies	Oversees the collaboration with stakeholders to conduct training, exercises, and drills, ensuring proper resources are available				

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT				
Describe partners and their relationships with the institution	Interacts with partners on staff	Engages partners to sustain relationships and ensure an effective response	Develops new partnerships to ensure effective emergency response				
Describes emergency agreements between the institution and other partners	Updates agreements with partners to ensure emergency response capability	Trains staff on agreements in place to ensure emergency response capability	Negotiates agreements between partner organizations to ensure emergency response capability				
Explains how the OH interacts with emergency preparedness and response networks	Describes the plans, policies and procedures the institution has in place to prepare for and respond to a public health emergency	Develops the organizational plans, policies and procedures to prepare for and respond to a public health emergency	Oversees the collaboration with emergency preparedness and response networks to develop and implement plans, policies, and procedures to prepare for and respond to a public health emergency				
3. Outbreak Response: Use syst	ematic approach for outbreak res	ponse					
Participates in meetings and conference calls to receive information on the situation	Prepares information on the situation	Facilitates the briefing of key stakeholders to create situational awareness	Manages implementation of COOP measures and ICS activation				
Describes circumstances for, and varying degrees of surge	Adjusts workflow to ensure timeliness of diagnostic testing in collaboration with surge partners	Identifies creative strategies to manage surge or overflow testing	Implements a management system that promotes flexibility and maximizes the ability to deliver surge capacity				
Describes the emergency communication plan and the policies and procedures for receiving and disseminating information with emergency response partners and/or public	Complies with the emergency communication plan and the policies and procedures for receiving and disseminating information with emergency response partners and/or public	Ensures rapid and secure communications with emergency response partners and/or public during emergencies and surge outbreaks	Manages the emergency communication plan and the policies, processes, and procedures for securely receiving and disseminating information with emergency response partners and the public during emergencies and surge incidents				
4 Outbreak Recovery: Use syste	4 Outbreak Recovery: Use systematic approach to recovery from outbreak and return to SOP						
Return to standard, daily roles and responsibilities	Provide updates and guidance to staff on changes to SOP and distributed updates	Manage and implement changes in SOP	Revise and oversee SOP to mitigate outbreak or infection recurrence				
Record feedback from patient/families/visitors/other engaged stakeholders in a systematic manner	Review stakeholder feedback and identify common trend for improvement(I)	Identify how feedback can be operationalized into institutional functioning	Implement and assess strategies and new systems based on stakeholder feedback				



# EVALUATION TOOLKIT

# **EVALUATION TOOLKIT**

An evaluation toolkit for OHW was developed across four levels of Kirkpatrick Evaluation: Level 1 (Reaction), Level 2 (Learning), Level 3 (Behavior), and Level 4 (Performance). The assessment toolkit is a synthesis of existing assessment tools and strategies and serves as an example for use and adaptation.

#### **LEVEL 1 EVALUATION: REACTION**

Level 1 evaluation (Reaction) measures the learner's reaction to the training, including their satisfaction with the training. Satisfaction can be measured by a questionnaire delivered after the training. Indicators may include satisfaction with meeting training goals, training materials, and facilitation. Scaled responses and open-ended feedback are helpful. A Level 1 assessment tool for Learner Satisfaction in OHW training is included below.

Level 1 Evaluation Tool: Learner Satisfaction Questionnaire 16

	rate your satisfaction with the OHW training using a scale from one to four (1 to 4) with one (1) being vest satisfaction and four (4) being the highest satisfaction.
1.	OHW training goals and objectives were met.
2.	OHW training materials were clear and easy to understand.
3.	OHW training facilitators were effective and supportive in their teaching.
4.	OHW training venue and schedule was conducive to learning.
Please	tell us what you found most useful in the workshop and why.
How w	ill you use the knowledge and skills gained from the workshop in your work?
What t	ypes of follow-up (e.g., technical assistance) would be helpful to you?
Цом м	ight we improve the workshop in the future?
now III	ight we improve the workshop in the future:
Additio	onal comments or suggestions:

 $<sup>16\</sup> IGWG,\ USAID,\ 2017,\ Participant\ Evaluation\ Form,\ https://www.igwg.org/wp-content/uploads/2017/05/EvaluationForm.pdf$ 

#### **LEVEL 2 EVALUATION: LEARNING**

Level 2 evaluation (Learning) measures how much information was effectively absorbed from training, and gauges the level of participants in developing knowledge, or mindset. Pre/post-test, self-assessment, peer evaluation (group exercise), or trainer observation methods may be used. A Level 2 evaluation tool for self-assessment of knowledge and skill is included below with instructions for use.

## Level 2 Evaluation Tool: Self-Assessment of Knowledge and Skill Checklist Description of the Self-Assessment of Knowledge and Skills Checklist

This self-assessment of knowledge and skills checklist is a tool for evaluating learning outcomes according to level two of the Kirkpatrick evaluation method. OHW competencies are organized into fifteen domains. The purpose of this assessment is to help you explore your level of competence within these domains. A competency is any knowledge or skill of an individual or organization that has been shown to cause or predict outstanding performance. A collection of competencies makes up a behavioral roadmap that is directly related to both individual and organizational performance. By assessing your level of knowledge or skill for each competency statement described, you will be able to prioritize your learning time to focus on those areas that are most important to you and to concentrate where the need for training and learning may be greatest.

#### Instructions for How to Complete the Knowledge and Skills Checklist

- 1. Read each competency statement listed within a domain. The tool is divided into the following fifteen OHW domains:
  - **GENDER**
  - **CULTURE, VALUES, AND ETHICS**
  - **POLICY AND ADVOCACY**
  - **LEADERSHIP**
  - **MANAGEMENT**
  - SYSTEMS THINKING
  - RISK ASSESSMENT AND MITIGATION
  - **ECOSYSTEMS HEALTH**
  - INFECTIOUS DISEASE MANAGEMENT
  - RESEARCH
  - COMMUNICATION
  - **COLLABORATION AND PARTNERSHIP**
  - **BEHAVIOR CHANGE**
  - PRINCIPLES OF PUBLIC HEALTH
  - **OUTBREAK INVESTIGATION AND RESPONSE**
- 2. Rate your level of knowledge and skill. In each domain, and for each competency statement, think about the level at which you are currently knowledgeable and able to perform the skill. Then rate your level of proficiency on each competency statement by selecting the number on the continuum from "None" (1) to "Proficient" (4) that best describes your self-reported level of expertise for that statement. If the competency statement is not relevant to your job role, you may select "NR" not relevant to my role.

#### Self-evaluate your competency in OHW on a scale of 1 to 4 based on perceived knowledge and skill

- 1 = None: I am unaware or have very little knowledge of the skill
- 2 = Aware: I have heard of, but have limited knowledge or ability to apply the skill
- 3 = Knowledgeable: I am comfortable with my knowledge or ability to apply the skill
- 4 = Proficient: I am very comfortable, am an expert, or could teach this skill to others
- NR = Not relevant to my role
- 3. Comment. At the end of each domain there is a place to write any comments you have. For example, if you feel like an expert in a competency but may still want training or learning opportunities in a particular skill, please enter your comments in the comments section. You may also want to share this assessment with your supervisor, colleagues, or others and ask them to add comments as well. These comments may be helpful to you and your supervisor in planning for your professional development.
- 4. Score your results. After you have entered your responses, calculate and enter the sum of your scores in the column next to "Total Score" for each domain and for the entire tool. Then calculate and enter your average score in the column next to "Average Total" for each domain and for the entire tool.
- 5. Review and interpret your results. You are now ready to identify the strengths in your practice and the areas that you would like to improve or strengthen. For example, if you have scored a "1" in any domain, you will want to consider focusing your time and energy toward achieving the competencies in that domain, followed by domains in which you scored a "2," with a lower priority given to domains in which you scored a "3" or higher. Once you have identified your priorities, you can use this information to guide you in developing a learning plan with one or more personal professional goals; in engaging in a discussion with your supervisor, mentor, or coach; and in choosing learning opportunities that will help you reach your goals and meet the requirements for continuing competence in OHW.

## Self-Assessment of Knowledge and Skills Checklist<sup>17</sup>

#### OHW Level 2 Evaluation Tool: Self-Assessment of Knowledge and Skills Checklist

#### Self-evaluate your competency in OHW on a scale of 1 to 4 based on perceived knowledge and skill

- 1 = None: I am unaware or have very little knowledge of the skill
- 2 = Aware: I have heard of, but have limited knowledge or ability to apply the skill
- 3 = Knowledgeable: I am comfortable with my knowledge or ability to apply the skill
- 4 = Proficient: I am very comfortable, am an expert, or could teach this skill to others

NR = Not relevant to my role

#### To what degree are you able to effectively...

#### **OUTBREAK INVESTIGATION AND RESPONSE**

Apply steps in conducting outbreak investigation

<sup>17</sup> PHF, 2014, Competency Assessment for Public Health Professionals, http://www.phf.org/resourcestools/Documents/Competency Assessment Tier1 2014.pdf

Review investigation and outbreak management experiences for applying best practices for potential outbreak events

Use systematic approach for outbreak response

Use systematic approach to recovery from outbreak and return to SOP

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 4 and enter the result here)

#### **GENDER**

Demonstrate awareness of gender dynamics in emerging pandemic threats

Evaluate how gender intersects with emerging pandemic threats

Develop gender sensitive response plans and programs for emerging pandemic threats

Provide gender-sensitive interdisciplinary healthcare for EPT

Integrate gender and EPT into interdisciplinary healthcare education

Develop gender-sensitive policies and frameworks for the health sector and EPT

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 6 and enter the result here)

#### **CULTURE, VALUES, AND ETHICS**

Demonstrate cultural competence in OH initiatives by identifying, interpreting and addressing local norms, wisdom, values, beliefs and culture about human, animal and environmental health.

Generate trust among the community in OH initiatives through actions based on the highest ethical, scientific, and professional standards, transparency, and accountability.

Prevent, minimize, and mitigate health harms and promote and protect public safety, health, and well-being in OH initiatives.

Promote equitable distribution of resources and social conditions necessary to secure equal opportunities for the realization of health and other capabilities by individuals and communities served by OH initiatives.

Foster positive, and mitigate negative, relationships among individuals, societies, and environments via OH in ways that protect and promote the flourishing of humans, animals, and ecologies.

Promote respect for personal autonomy, self-determination, privacy, and the absence of discrimination and domination in its many interpersonal and institutional forms in all OH initiatives.

Include and engage diverse publics, communities, and stakeholders to ensure informed decision making and promote diversity within OH programs.

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 7 and enter the result here)

#### POLICY AND ADVOCACY

Demonstrate Awareness of the Political Process and Roles in relation to OH

Analyze OH policy and identify the different challenges involved in development and implementation

Develop OH policy and conduct policy implementation

Organize national and international stakeholders in negotiating for OH policy

Utilize principles of social marketing and advocacy to communicate routinely with target audiences regarding OH needs, objectives, accomplishments, and critical information

Translate community and organizational analyses and plans into specific regulatory actions and legislative proposals for OH

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 6 and enter the result here)

#### **LEADERSHIP**

Articulate a shared mission, set of core values, and vision to achieve OH goals.

Utilize collaborative methods and skills of negotiation and conflict management across sectors and disciplines to facilitate cooperation in working together to address challenges and achieve OH goals.

Motivate, coach, mentor, and mobilize the OH team to work together to achieve OH goals.

Apply ethical principles and professional code of conduct in leadership of OH programs.

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 4 and enter the result here)

#### MANAGEMENT

Ensure sound management of OH operations

Plan, Design, Implement, Monitor, and Evaluate OH Programs

Ensure sound financial management of OH programs

Ensure effective management of human resources for OH programs

Ensure readiness to prepare and respond to emerging pandemic threats and outbreaks

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 5 and enter the result here)

#### SYSTEMS THINKING

Describe the elements of complex problems and systems thinking.

Create and use systems mapping to deepen understanding of One Health problems.

Partner with One Health team members to develop solutions to complex One Health problems using systems thinking and tools.

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

#### RISK ASSESSMENT AND MITIGATION

Conduct One Health risk assessment and analysis

Implement One Health risk management and mitigation

Conduct One Health risk communication and reporting

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

#### **ECOSYSTEMS HEALTH**

Understand fundamental ecological/ecosystem principles

Recognize interrelationships among ecosystems, animal health and human health

Analyze the effects of direct impacts on the environment

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

#### INFECTIOUS DISEASE MANAGEMENT

Identify and analyze the risk factors associated with illness during an infectious disease outbreak or epidemic.

Design and implement an infectious disease management plan.

Evaluate the effectiveness of One Health actions in infectious disease management.

Design a disease surveillance and monitoring system.

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 4 and enter the result here)

#### RESEARCH

Develop research programs

Ensure the ethical and responsible conduct of research

Integrate scientific and technical knowledge for use as a foundation for research

Develop new testing methodology

Conduct research to address a public health issue or answer a public health question

Conduct research according to professional standards of data management, analysis, and application

Disseminate research findings

Translate research findings to public health practice

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 8 and enter the result here)

#### COMMUNICATION

Deploy formal written and oral communication strategies

Display active listening skills when interacting with others

Demonstrate comprehension of written documents and directions

Ensure professionalism in communication with customers and stakeholders

Prepare professional written reports and oral presentations

Apply emergency and risk communication principles and techniques to explain information to targeted audiences

Work with the media to provide information about public health laboratories and public health issues

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 7 and enter the result here)

#### **COLLABORATION AND PARTNERSHIP**

Promote inclusion of representatives of diverse constituencies and disciplines

Share vision, power, responsibility, and accountability among collaborators

Use the knowledge of one's own role and those of other professions to appropriately assess and address the needs of the organization and populations served

Communicate with all stakeholders in a responsive and responsible manner that supports a team approach to the strengthening OH systems and to promote OH

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 4 and enter the result here)

#### **BEHAVIOR CHANGE**

Explain behavior change theories and change management concepts

Adapt and apply models for individual behavior change to One Health contexts

Design behavior change strategies for One Health interventions in communities

#### Total Score (Add all scores and enter total here)

## Average Total (Divide the "Total Score" by 3 and enter the result here)

PRINCIPLES OF PUBLIC HEALTH	
Analyze factors of health that impact the health of the human, animal and environmental communities	
Implement policies and programs in collaboration with governmental and community organizations to support One Health	
Engage communities in programs to improve OH systems	
Total Score (Add all scores and enter total here)	
Average Total (Divide the "Total Score" by 3 and enter the result here)	
One Health Workforce Competency Across Fifteen Domains	
Total Score (Add all scores and enter total here)	
Average Total (Divide the "Total Score" by 67 and enter the result here)	
Comments:	

#### **LEVEL 3 EVALUATION: BEHAVIOR**

Level 3 evaluation, Behavior, measures how much training influenced participants behavior, and evaluates how they apply their knowledge to their performance. Assessing changes in behavior or performance can be done through various methods including simulations (observation), Vignettes, supervisory monitoring, interview after selfassessment or exam, 360-degree feedback, and more. Below is a Level 3 evaluation tool for supervisor direct observation of performance checklist for OHW.

## Level 3 Evaluation Tool: Supervisor Direct Observation of Performance Checklist **Description of the Supervisor Direct Observation of Performance Checklist**

This Supervisor Direct Observation of Performance Checklist is a tool for evaluating behavior according to level 3 of the Kirkpatrick evaluation method. OHW competencies are organized into fifteen domains. The purpose of this assessment is to help supervisors or trainers evaluate supervisees' or trainees' level of competence within these domains. A competency is any knowledge or skill of an individual or organization that has been shown to cause or predict outstanding performance. A collection of competencies makes up a behavioral roadmap that is directly related to both individual and organizational performance. By assessing the learners' frequency of behavior and independence of performance, the supervisor or trainer can determine learners' competency to perform their job role and identify areas for further training and supervision.

#### Instructions for How to Complete the Supervisor Direct Observation of Performance Checklist

- 1. Read each competency statement listed within a domain. The tool is divided into the following fifteen **OHW domains:** 
  - **GENDER**
  - CULTURE, VALUES, AND ETHICS
  - POLICY AND ADVOCACY

- LEADERSHIP
- MANAGEMENT
- SYSTEMS THINKING
- RISK ASSESSMENT AND MITIGATION
- **ECOSYSTEMS HEALTH**
- INFECTIOUS DISEASE MANAGEMENT
- RESEARCH
- COMMUNICATION
- **COLLABORATION AND PARTNERSHIP**
- **BEHAVIOR CHANGE**
- PRINCIPLES OF PUBLIC HEALTH
- **OUTBREAK INVESTIGATION AND RESPONSE**
- 2. Rate the supervisee's level of performance. In each domain, and for each competency statement, think about the level at which the supervisee is performing. Then rate the supervisee's level of performance on each competency statement by selecting the number on the continuum from "None" (1) to "Mastery" (4) that best describes the supervisee's performance. If the competency statement is not relevant to the supervisee's job role, you may select "NR" not relevant to role.

## Directly observe demonstrated competency in One Health on a scale of 1 to 4 based on frequency of behavior and independence of performance

- None: Behavior is not demonstrated and/or task is not performed.
- 2. Developing: Behavior is demonstrated occasionally and/or task is performed with supervision.
- 3. Competent: Behavior is demonstrated frequently and/or task is performed independently.
- 4. Mastery: Behavior is demonstrated consistently and/or task is performed and taught to others.

NR = Not relevant to role

## To what degree does the learner demonstrate...

- 3. Comment. At the end of each domain there is a place to write any comments you have. This is an opportunity to describe what the supervisee is doing well and in what areas they can improve. For example, if you feel like the supervisee is a master in a competency but may still need additional training or learning opportunities in a particular skill, please enter your comments in the comments section. You can ask the learner for their feedback and inputs as well. These comments may be helpful to you and your supervisee in planning for their professional development.
- 4. Score the results. After you have entered your responses, calculate and enter the sum of your supervisee's scores in the column next to "Total Score" for each domain and for the entire tool. Then calculate and enter the average score in the column next to "Average Total" for each domain and for the entire tool.

5. Review and interpret the results. You are now ready to identify the strengths in your supervisee's practice and the areas that you would like the learner to improve or strengthen. For example, if your supervisee scored a "1" in any domain, you will want to consider focusing your time and energy toward supporting the supervisee in achieving the competencies in that domain, followed by domains in which they scored a "2," with a lower priority given to domains in which they scored a "3" or higher. Once you have identified the priorities in collaboration with your supervisee, you can use this information to guide you in developing a learning plan with one or more goals; in engaging in a discussion with your supervisee; and in choosing learning opportunities that will help your supervisee reach their goals and meet the requirements for continuing competence in OHW.

#### OHW Level 3 Evaluation Tool: Supervisor Direct Observation of Performance Checklist

## Directly observe demonstrated competency in Gender and One Health on a scale of 1 to 4 based on frequency of behavior and independence of performance

None: Behavior is not demonstrated and/or task is not performed.

Developing: Behavior is demonstrated occasionally and/or task is performed with supervision.

Competent: Behavior is demonstrated frequently and/or task is performed independently.

Mastery: Behavior is demonstrated consistently and/or task is performed and taught to others.

NR = Not relevant to my role

## To what degree does the learner demonstrate...

## **OUTBREAK INVESTIGATION AND RESPONSE**

Apply steps in conducting outbreak investigation

Review investigation and outbreak management experiences for applying best practices for potential outbreak events

Use systematic approach for outbreak response

Use systematic approach to recovery from outbreak and return to SOP

### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 4 and enter the result here)

#### GENDER

Demonstrate awareness of gender dynamics in emerging pandemic threats

Evaluate how gender intersects with emerging pandemic threats

Develop gender sensitive response plans and programs for emerging pandemic threats

Provide gender-sensitive interdisciplinary healthcare for EPT

Integrate gender and EPT into interdisciplinary healthcare education

Develop gender-sensitive policies and frameworks for the health sector and EPT

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 6 and enter the result here)

#### **CULTURE, VALUES, AND ETHICS**

Demonstrate cultural competence in OH initiatives by identifying, interpreting and addressing local norms, wisdom, values, beliefs and culture about human, animal and environmental health.

Generate trust among the community in OH initiatives through actions based on the highest ethical, scientific, and professional standards, transparency, and accountability.

Prevent, minimize, and mitigate health harms and promote and protect public safety, health, and well-being in OH initiatives.

Promote equitable distribution of resources and social conditions necessary to secure equal opportunities for the realization of health and other capabilities by individuals and communities served by OH initiatives.

Foster positive, and mitigate negative, relationships among individuals, societies, and environments via OH in ways that protect and promote the flourishing of humans, animals, and ecologies.

Promote respect for personal autonomy, self-determination, privacy, and the absence of discrimination and domination in its many interpersonal and institutional forms in all OH initiatives.

Include and engage diverse publics, communities, and stakeholders to ensure informed decision making and promote diversity within OH programs.

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 7 and enter the result here)

#### **POLICY AND ADVOCACY**

Demonstrate Awareness of the Political Process and Roles in relation to OH

Analyze OH policy and identify the different challenges involved in development and implementation

Develop OH policy and conduct policy implementation

Organize national and international stakeholders in negotiating for OH policy

Utilize principles of social marketing and advocacy to communicate routinely with target audiences regarding OH needs, objectives, accomplishments, and critical information

Translate community and organizational analyses and plans into specific regulatory actions and legislative proposals for OH

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 6 and enter the result here)

### **LEADERSHIP**

Articulate a shared mission, set of core values, and vision to achieve OH goals.

Utilize collaborative methods and skills of negotiation and conflict management across sectors and disciplines to facilitate cooperation in working together to address challenges and achieve OH goals.

Motivate, coach, mentor, and mobilize the OH team to work together to achieve OH goals.

Apply ethical principles and professional code of conduct in leadership of OH programs.

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 4 and enter the result here)

#### MANAGEMENT

Ensure sound management of OH operations

Plan, Design, Implement, Monitor, and Evaluate OH Programs

Ensure sound financial management of OH programs

Ensure effective management of human resources for OH programs

Ensure readiness to prepare and respond to emerging pandemic threats and outbreaks

#### Total Score (Add all scores and enter total here)

#### Average Total (Divide the "Total Score" by 5 and enter the result here)

#### SYSTEMS THINKING

Describe the elements of complex problems and systems thinking.

Create and use systems mapping to deepen understanding of One Health problems.

Partner with One Health team members to develop solutions to complex One Health problems using systems thinking and tools.

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

#### RISK ASSESSMENT AND MITIGATION

Conduct One Health risk assessment and analysis

Implement One Health risk management and mitigation

Conduct One Health risk communication and reporting

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

#### **ECOSYSTEMS HEALTH**

Understand fundamental ecological/ecosystem principles

Recognize interrelationships among ecosystems, animal health and human health

Analyze the effects of direct impacts on the environment

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

## INFECTIOUS DISEASE MANAGEMENT

Identify and analyze the risk factors associated with illness during an infectious disease outbreak or epidemic.

Design and implement an infectious disease management plan.

Evaluate the effectiveness of One Health actions in infectious disease management.

Design a disease surveillance and monitoring system.

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 4 and enter the result here)

#### RESEARCH

Develop research programs

Ensure the ethical and responsible conduct of research

Integrate scientific and technical knowledge for use as a foundation for research

Develop new testing methodology

Conduct research to address a public health issue or answer a public health question

Conduct research according to professional standards of data management, analysis, and application

Disseminate research findings

Translate research findings to public health practice

## Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 8 and enter the result here)

#### COMMUNICATION

Deploy formal written and oral communication strategies

Display active listening skills when interacting with others

Demonstrate comprehension of written documents and directions

Ensure professionalism in communication with customers and stakeholders

Prepare professional written reports and oral presentations

Apply emergency and risk communication principles and techniques to explain information to targeted audiences

Work with the media to provide information about public health laboratories and public health issues

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 7 and enter the result here)

#### **COLLABORATION AND PARTNERSHIP**

Promote inclusion of representatives of diverse constituencies and disciplines

Share vision, power, responsibility, and accountability among collaborators

Use the knowledge of one's own role and those of other professions to appropriately assess and address the needs of the organization and populations served

Communicate with all stakeholders in a responsive and responsible manner that supports a team approach to the strengthening OH systems and to promote OH

#### Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 4 and enter the result here)

#### **BEHAVIOR CHANGE**

Explain behavior change theories and change management concepts

Adapt and apply models for individual behavior change to One Health contexts

Design behavior change strategies for One Health interventions in communities

Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

#### PRINCIPLES OF PUBLIC HEALTH

Analyze factors of health that impact the health of the human, animal and environmental communities

Implement policies and programs in collaboration with governmental and community organizations to support One Health

Engage communities in programs to improve OH systems

Total Score (Add all scores and enter total here)

Average Total (Divide the "Total Score" by 3 and enter the result here)

**One Health Workforce Competency Across Fifteen Domains** 

Total Score (Add all scores and enter total here)

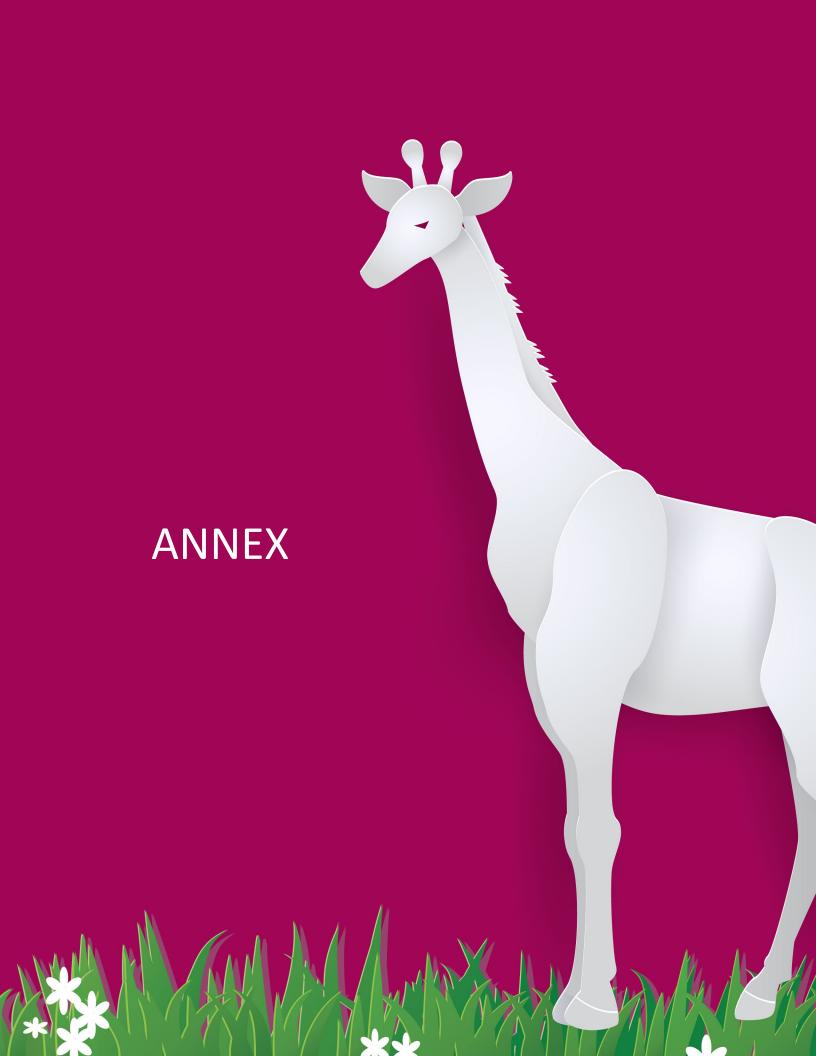
Average Total (Divide the "Total Score" by 67 and enter the result here)

## **LEVEL 4 EVALUATION: RESULTS**

Level 4 evaluation, Results, measures and analyzes the impact of training at the organizational or institutional level, and links these results to the individual or the program. Methods used for measuring at this level may include a field-based project, research project, program evaluation, quality improvement project, or other methods. A Level 4 evaluation program quality checklist for OHW is included below.

## Level 4 Evaluation Tool: Program Quality Checklist

Score the Institution Education	on a scale of 1-4 for Institutional Capacity for Inter-professional One Health Workforce
1. Basic	Institutions at this stage include OHW education in a limited fashion, often focusing solely on an introduction to the principles of OHW. There are minimal or no interdisciplinary OHW specific education programs within the institution's health sciences schools or colleges.
2. Mid-level	Institutions at this stage have expanded OHW education. The curriculum includes OHW education incorporated into more than 50 percent of the degree curriculum and OHW is incorporated across more than one department. Students might have an option to choose an elective OHW or a field experience in OHW in addition to classroom learning and lectures.
3. High-level	Institutions at this stage have integrated OHW education throughout the 4-year curricula. The curricula includes multidisciplinary methods for training and evaluation across at least 10 OHW domains. These institutions may host OHW fellowships, residency tracks, and specialized student certificate programs in OHW.
4. Advanced	These institutions established activities to promote interdisciplinary OHW programs, schools and colleges in addition to inter-professional education across schools/colleges. They fully integrated OHW as a curricular thread throughout all levels of health professional education. They have avoided creating stand-alone curricula or modules, choosing instead to layer OHW into existing curricula as appropriate. They have postgraduate masters and PhD degree programs in OHW.
Comments:	



# **ANNEX**

## OHW Competency Framework with Proficiency Level Across all Domains

## One Health Competency Framework: Competencies and Sub-Competencies with Proficiency Level

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Domain: One Health Principles a	nd Concepts		
Competency 1 Explain the histor	y and concept of One Health		
Define One Health and explain OH key concepts.	Describe the historical context of One Health	List stakeholders currently using the One Health approach.	Compare and contrast One Health with ecohealth, ecosystem health, global health, and environmental health
	C domains and their application ( n and Partnership, Values and Et	Six Global Domains: Managemen hics, Systems Thinking)	t, Communication, Culture and
Describe the six global OH core competency domains, including their purpose and how they can be used.	Describe the OH core competencies by level of practitioner from Beginner, Intermediate, Advanced, to Expert level.	Describe evaluation tools and methods for ensuring proficiency of OH practitioners in OH core competencies.	Deliver training for OH practitioners in curriculum to achieve OH core competencies.
Competency 3 Describe the appl	ication of the One Health approa	ch.	
Explain the application of the One Health approach.	Describe the trans-disciplinary application of the One Health approach.	Explain how One Health successfully brings together stakeholders to address complex emerging and reemerging disease threats	Apply OH to create stronger and more efficient integrated health systems with inputs from multiple stakeholders in addressing global health issues
Domain: Infectious Disease Man	agement and Fundamentals		
Competency 1 Identify and analy	ze the risk factors associated wit	th illness during an infectious dise	ase outbreak or epidemic.
Describe the principles of infectious diseases, modes of transmission, and factors associated with a possible increased risk of infection	Conduct a risk assessment including necessary components to inform infectious disease management	Analyze findings of risk assessment to identify risk factors potential impact on population	Instruct or manage a team in implementation and analysis of risk assessment
Competency 2 Design and imple	ment an infectious disease mana	gement plan	
Describe the components of infectious disease management	Design an infectious disease management plan	Implement, monitor, and evaluate an infectious disease management plan	Lead protocol development for a One Health Infectious disease management plan

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Describe the measures used to evaluate effectiveness of a infectious disease control plan	Assess an infectious disease control plan and consider the unintentional or adverse effects if implemented	Implement a situational assessment to evaluate the effectiveness of an infectious disease control plan	Instruct or manage a team in conducting a situational assessment to evaluate effectiveness of infectious disease control plan
Competency 4 Design a disease	surveillance and monitoring syste	m	
Describe components of a disease surveillance system	Implement data collection and analysis for disease surveillance	Interpret and present findings to an audience on disease surveillance with recommended actions	Lead strategy development for infectious disease surveillance
Domain: Outbreak Investigation	and Response		
Competency 1 Outbreak Investig	gation: Apply steps in conducting	outbreak investigation	
Sub-Competency 1.01 Monitor f	or a potential outbreak		
List sources of information that might be used to indicate unusual disease activity (clinicians, patients, surveillance data, media)	Gather information from various sources of disease reporting	Develop data collection tools to ensure accurate information collection from different sources	Evaluate the quality information from various sources of disease reporting
Sub-Competency 1.02 Determin	e cause of an outbreak		
Identify what constitutes an unusual occurrence of a disease and a potential outbreak	Utilize data from collected information to develop hypothesis on cause of outbreak	Test hypothesis on the cause of outbreak to determine the cause and develop descriptive features of the outbreak	Evaluate the hypothesis testing and determine a cause and descriptive features the outbreak
Sub-Competency 1.03 Establish	a case definition		
Collect information to formulate the demographic and temporal description of the apparent outbreak	Utilize data from collected information to establish a case definition hypothesis	Test hypothesis to establish a case definition and develop descriptive features of a case definition	Evaluate hypothesis to establish a case definition and determine descriptive feature of a case
Sub-Competency 1.04 Collect an	d test samples		
List and describe the procedures for collecting, storing and transporting clinical and/or environmental samples	Collect clinical and environmental samples according to procedure	Develop collection procedures and determine clinical and environmental samples to be collected	Evaluate collection procures and determination of which clinical/environmental samples are collected
Sub-Competency 1.05 Determine the need for outbreak/emergency notification			
Describes requirements for notification of outbreaks according to organizational/national plans and policies	Implements organizational plans and policies for notification of emergencies and/or outbreaks	Develops internal policies and procedures for notification of emergencies and/or outbreaks	Oversees the collaboration with stakeholders and agencies to develop and implement plans and policies for notification of emergencies and/or outbreaks

Competency 2 Outbreak Preparation: Review investigation and outbreak management experiences for applying best practices for

potential outbreak events

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Sub-Competency 2.01 Prepare f	Sub-Competency 2.01 Prepare for outbreak/emergency events			
Explains the outbreak response plan and sustainability of Operations Plan	Assists with development and implementation of the outbreak response plan and sustainability of Operations Plan	Manages development and implementation of the outbreak response plan	Oversees outbreak response plan, including implementation of the sustainability of Operations Plan with external partners	
Sub-Competency 2.02 Engage in	emergency response training			
Participates in outbreak response training, exercises, and drills	Contributes to the development of outbreak response training, exercises, and drills	Conducts outbreak response training, exercises, and drills in collaboration with stakeholder agencies	Oversees the collaboration with stakeholders to conduct training, exercises, and drills, ensuring proper resources are available	
Sub-Competency 2.03 Identify k	ey partners			
Describe partners and their relationships with the institution	Interacts with partners on staff	Engages partners to sustain relationships and ensure an effective response	Develops new partnerships to ensure effective emergency response	
Sub-Competency 2.04 Execute a	greements with partners			
Describes emergency agreements between the institution and other partners	Updates agreements with partners to ensure emergency response capability	Trains staff on agreements in place to ensure emergency response capability	Negotiates agreements between partner organizations to ensure emergency response capability	
Sub-Competency 2.05 Engage of	utbreak/emergency preparedness	and response networks		
Explains how the OH interacts with emergency preparedness and response networks	Describes the plans, policies and procedures the institution has in place to prepare for and respond to a public health emergency	Develops the organizational plans, policies and procedures to prepare for and respond to a public health emergency	Oversees the collaboration with emergency preparedness and response networks to develop and implement plans, policies, and procedures to prepare for and respond to a public health emergency	
Competency 3 Outbreak Respon	nse: Use systematic approach for	outbreak response		
Sub-Competency 3.01 Conduct	situational briefing			
Participates in meetings and conference calls to receive information on the situation	Prepares information on the situation	Facilitates the briefing of key stakeholders to create situational awareness	Manages implementation of COOP measures and ICS activation	
Sub Competency 3.02 Manage S	Sub Competency 3.02 Manage Surge Capacity			
Describes circumstances for, and varying degrees of surge	Adjusts workflow to ensure timeliness of diagnostic testing in collaboration with surge partners	Identifies creative strategies to manage surge or overflow testing	Implements a management system that promotes flexibility and maximizes the ability to deliver surge capacity	
Sub-Competency 3.03 Engage of	utbreak/emergency communicati	on		
Describes the emergency communication plan and the policies and procedures for	Complies with the emergency communication plan and the policies and procedures for	Ensures rapid and secure communications with emergency response partners	Manages the emergency communication plan and the policies, processes, and	

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
receiving and disseminating information with emergency response partners and/or public	receiving and disseminating information with emergency response partners and/or public	and/or public during emergencies and surge outbreaks	procedures for securely receiving and disseminating information with emergency response partners and the public during emergencies and surge incidents
Competency 4 Outbreak Recove	ry: Use systematic approach to r	ecovery from outbreak and return	to SOP
Sub-Competency 4.01 Return to	normal operating procedures		
Return to standard, daily roles and responsibilities	Provide updates and guidance to staff on changes to SOP and distributed updates	Manage and implement changes in SOP	Revise and oversee SOP to mitigate outbreak or infection recurrence
Sub-Competency 4.02 Obtain an	d incorporate stakeholder feedba	ack	
Record feedback from patient/families/visitors/other engaged stakeholders in a systematic manner	Review stakeholder feedback and identify common trend for improvement(I)	Identify how feedback can be operationalized into institutional functioning	Implement and assess strategies and new systems based on stakeholder feedback
Domain Ecosystem Health			
Competency 1 Ecosystems Prince	iples: Understand fundamental e	cological/ecosystem principles	
Describe the basic principles and concepts of ecosystem health	Describe different ecosystem processes and components (abiotic and biotic)	Describe different types of ecosystems	Integrate ecosystem principles into OH programs
Competency 2 Ecosystems Relat	ionships: Recognize interrelation	ships among ecosystems, animal l	nealth and human health
Describe natural and man made factors that disrupt ecosystems	Implement mitigations measures to counteract ecosystem health disruption	Manage and evaluate mitigation measures to counteract ecosystem health disruption	Design and oversee mitigation measures to counteract ecosystem health disruption
Competency 3 Ecosystems Impa	cts: Analyze the effects of direct i	mpacts on the environment	
Sub-Competency 3.01 Analyze e	ffect of disruption of ecosystems	and the impacts on human and a	nimal health
Identify the risks of ecosystem disruption to human and animal health	Evaluate disrupted ecosystem impacts on human and animal health	Manage programs to mitigate impacts of disrupted ecosystems on human and animal health	Design and oversee programs to mitigate impacts of disrupted ecosystems on human and animal health
Sub-Competency 3.02 Effect of c	climate change on ecosystem hea	lth	
Describe effects of climate change on ecosystem health	Implement strategies for climate change mitigation and adaptation	Manage and evaluate programs for climate change mitigation and adaptation	Design and oversee programs for climate change mitigation and adaptation
Domain One Health Epidemiolog	ВУ		
Competency 1 Apply epidemiolo	ogical thinking and a public health	approach to a OH related health	issue or disease
Define basic epidemiological terms and describe history of public health approaches	Identify OH issues that could be addressed using	Design epidemiological strategies and public health	Evaluate and promote epidemiological strategies and public health approaches used

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
	epidemiological thinking and a public health approach	approaches to address OH issues or diseases	to address OH issues or diseases	
Competency 2 Implement and	interpret surveillance systems to a	ssess OH related health issue or o	lisease	
Sub-Competency 2.01 Define su	urveillance and describe its role in	он		
Describe surveillance and its role in OH	Identify types of surveillance methods for OH issues	Design various surveillance systems	Evaluate efficacy of various surveillance systems for a OH issue	
Sub-Competency 2.02 Determine	ne sources of OH surveillance data			
Recognize potential uses of data to inform surveillance system	Describe sources, quality, and limitations of surveillance data	Decide on sources of surveillance data	Assess the adequacy of the data elements to be collected or reported	
Sub-Competency 2.03 Collect C	H surveillance data			
Collect data for verification of the defined surveillance system parameters	Test data collection, data storage, and analytical methods	Validate data collection, data storage, and analytical methods	Assess performance of data collection systems against the defined surveillance system parameters monitor data quality	
Sub-Competency 2.04 Interpret	OH surveillance data			
Complete data analysis and report key findings	Identify implications of key findings on OH issues	Examine implications of key findings on OH issues	Synthesize key findings an implications on OH for dissemination for policy makers	
Sub-Competency 2.05 Evaluate	OH surveillance systems			
Collect data necessary for evaluation of surveillance systems	Implement evaluation data collections systems	Develop recommendations for surveillance system based on data	Design evaluation systems and decide on modifications to systems	
Competency 3 Provide OH police	cy recommendations based on epi	demiological analysis		
Sub-Competency 3.01 Develop	OH policies based on epidemiolog	ical analysis		
Describe OH policy recommendations	Identify surveillance data results to develop OH policy recommendations	Translate results from surveillance studies into policy recommendations	Evaluate policy recommendations for accuracy, feasibility and impact	
Sub-Competency 3.02 Disseminate OH policies based on epidemiological analysis				
Describe dissemination plan for OH policy recommendations	Implement dissemination plan for OH policy recommendations	Design a dissemination plan for OH policy recommendations	Evaluate dissemination plan for OH policy recommendations	
Sub-Competency 3.03 Evaluate	Sub-Competency 3.03 Evaluate OH policies based on epidemiological analysis			
Collect data on impact of OH policies	Interpret data collected on impact of OH policies	Provide feedback on OH policies based on impact data	Re-design OH policies based on feedback	
Domain: One Health Risk Analy	rsis			

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Competency 1 Risk Assessment	: Conduct One Health Risk Assessi	ment and Analysis	
Sub-Competency 1.01 Hazard id	lentification and characterization		
Describes the hazard identification process and procedures	Conducts hazard identification and characterization using qualitative and quantitative methodologies	Manages the hazard identification and characterization process	Develops policies and procedures regarding hazard identification and characterization
Sub-Competency 1.02 Exposure	assessment		
Describes the exposure assessment process and procedures	Conducts exposure assessment using qualitative and quantitative methodologies	Manages the exposure assessment process	Develops policies and procedures regarding exposure assessment
Sub-Competency 1.03 Risk char	acterization		
Describes the risk characterization process and procedures	Conducts risk characterization using qualitative and quantitative methodologies	Manages the risk characterization process	Develops policies and procedures regarding risk characterization
Competency 2 Risk Managemer	nt: Implement One Health Risk Ma	nagement and Mitigation	
Sub-Competency 2.01 Option as	ssessment		
Describes risk management and mitigation option assessment	Implements risk management and mitigation option assessment	Manages the implementation of risk management and mitigation option assessment	Develops policies and procedures regarding risk mitigation option assessment
Sub-Competency 2.02 Option in	nplementation		
Describes risk management option implementation	Implements risk management option implementation	Manages the implementation of risk management option implementation	Develops policies and procedures regarding risk management option implementation
Sub-Competency 2.03 Monitori	ng and review		
Describes risk management and mitigation monitoring and review	Implements risk management and mitigation monitoring and review	Manages the implementation of risk management and mitigation monitoring and review	Develops policies and procedures regarding risk mitigation planning and implementation utilizing findings of monitoring and review
Competency 3 Risk Reporting: C	Conduct One Health Risk Commun	ication and Reporting	
Sub-Competency 3.01 Methods	and tools		
Describes risk communication and reporting methods and tools	Conducts risk communication and reporting utilizing methods and tools	Manages risk communication and reporting and evaluates effectiveness of methods and tools	Develops policies, processes, and procedures for risk communication and reporting methods and tools
Sub-Competency 3.02 Key mess	ages		

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Describes risk communication and reporting key messages	Delivers risk communication and reporting using key messages	Manages risk communication and reporting ensuring key messages are conveyed	Develops policies, processes, and procedures for risk communication and reporting to ensure key messages are conveyed
Sub-Competency 3.03 Quality as	ssurance		
Describes risk communication quality assurance standards of timeliness, transparency, effectiveness, and adequacy	Conducts risk communication and reporting according to quality assurance standards	Manages risk communication and reporting and evaluates to ensure quality assurance standards are met	Develops policies, processes, and procedures for risk communication and reporting quality assurance
Domain: One Health Research			
Competency 1 Research program	ns: develops research programs		
Sub-Competency 1.01 Research	objectives and agenda		
Describes the OH's research objectives	Illustrates how research projects fit within the OH's research objectives and agenda	Formulates research projects that align with the OH's research objectives and agenda	Develops hypothesis-driven research objectives and a research agenda for the OH
Sub-Competency 1.02 Research	funding		
Describes general funding mechanisms that support public health research	Participates in writing funding proposals for research projects	Leads drafting of research funding proposals	Manages the overall processes for obtaining and sustaining research funds
Sub-Competency 1.03 Funding p	proposal reviews		
Describes basics of the proposal review process	Reviews internal proposals to verify adherence to guidelines and recommended principles	Serves as an ad hoc reviewer for research proposal reviews	Serves on research proposal review committees
Sub-Competency 1.04 Research	staffing needs		
Describes own role as part of the research staff	Recognizes research staffing needs	Participates in hiring research staff	Develops the strategic plan to recruit and retain researchers
Sub-Competency 1.05 Research	resource management		
Uses financial and material resources judiciously	Considers available financial, human, and material resources when planning experiments	Assesses financial, human, and material resources when planning research projects	Aligns financial, human, and material resources to support the research program
Sub-Competency 1.06 Regulatory requirements			
Complies with regulatory requirements in the performance of research	Identifies noncompliance with regulatory requirements pertaining to the performance of research	Manages processes regarding staff compliance with regulatory requirements concerning the performance of research	Ensures that OH programs operate consistent with regulatory requirements concerning the performance of research
	ensures the ethical and responsib	la conduct of recearch	

**Sub-Competency 2.01 Ethical conduct in research** 

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Complies with policies, processes, and procedures related to ethical conduct in research	Instructs others in policies, processes, and procedures regarding ethical conduct in research	Ensures staff compliance to policies and procedures related to ethical research practices	Oversees the policies, processes, and procedures for implementing and maintaining ethical research practices
Sub-Competency 2.02 Human ar	nd nonhuman subjects		
Complies with policies, processes, and procedures related to doing research in human and nonhuman subjects	Instructs others in policies, processes, and procedures related to doing research in human and nonhuman subjects	Ensures staff compliance to policies and procedures related to doing research in human and nonhuman subjects	Oversees the policies, processes, and procedures for implementing and maintaining ethical practices related to doing research in human and nonhuman subjects
Sub-Competency 2.03 Collabora	tion		
Complies with established agreements with collaborators	Describes complexities regarding issues of collaboration, including authorship	Ensures staff compliance with established agreements for research collaboration	Builds research collaborations
Sub-Competency 2.04 Sharing re	esearch data		
Complies with established agreements pertaining to research data sharing and the use of intellectual property	Describes issues that might arise pertaining to data ownership and the sharing of data	Ensures staff compliance with established agreements regarding data sharing	Establishes guidelines for sharing research data
Competency 3 Research foundate	tion: integrates scientific and tech	nical knowledge for use as a foun	dation for research
Sub-Competency 3.01 Literature	searches		
Performs basic literature searches using a limited number of sources	Performs complex searches, aggregating results from multiple sources	Validates appropriateness of how searches are performed	Rectifies gaps in data generated from searches
Sub-Competency 3.02 Critique of	f scientific literature		
Reads scientific and technical literature relevant to own work	Assesses quality of literature and pertinence to own work	Synthesizes scientific evidence derived from literature	Evaluates scientific literature and data to determine impact on OH research programs
Sub-Competency 3.03 Statistical	concepts and tests		
Recognizes meaning of common statistical concepts and tests	Applies appropriate statistical concepts and tests in performance of research	Interprets statistical tests and concepts used in literature	Critiques statistical tests and concepts used in literature
Sub-Competency 3.04 Study designs			
Explains characteristics of common study designs	Recognizes strengths and limitations of study designs	Considers study design characteristics when planning research activities	Evaluates evidence-based research guidelines to select or develop study designs
Sub-Competency 3.05 Scientific	and technical concepts and proce	dures	
States scientific and technical concepts and procedures	Discusses scientific and technical concepts and procedures	Critiques scientific and technical concepts and procedures	Generates novel scientific and technical concepts and procedures

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Sub-Competency 3.06 Emerging trends			
States latest scientific and technical advances relevant to current research	Discusses latest scientific and technical advances relevant to current research	Identifies emerging trends in scientific and technical advances and possible impact to OH	Analyzes emerging trends in scientific and technical advances to make decisions regarding impact on OH
Competency 4 Research project	execution: conducts research to a	address a public health issue or ar	swer a public health question
Sub-Competency 4.01 Research	project design		
Explains how own tasks and activities support specific research projects	Summarizes the public health issues and research questions addressed by specific research projects	Designs research projects	Oversees research projects to address the identified public health issues or questions
Sub-Competency 4.02 Experime	ntal strategy and design		
States the purpose of each step performed in individual experiments	Explains the overall experimental strategy	Designs individual experiments	Generates the overall experimental strategy and hypotheses for specific research project
Sub-Competency 4.03 Conduct of	of experiments		
Uses established research protocols	Provides input regarding research protocols and the conduct of experiments	Develops research protocols to guide the conduct of experiments	Oversees the conduct of experiments
Competency 5 Research data madata management, analysis, and	anagement, analysis, and applicat d application	cion: conducts research according	to professional standards of
Sub-Competency 5.01 Data colle	ection and quality		
Records experimental procedures and data	Monitors quality and integrity of recorded information and data	Designs data collection and entry methods that meet data quality standards	Develops policies, processes, and procedures to ensure data quality and integrity
Sub-Competency 5.02 Data man	agement		
Complies with policies and procedures for data management	Assists with the management of data for individual experiments	Manages project data	Oversees the management of research data for the OH
Sub-Competency 5.03 Data anal	ysis and results interpretation		
Assists with data analysis of individual experiments	Analyzes project data	Interprets data for individual research projects	Oversees data analysis plans and results interpretation for the OH's research projects
Sub-Competency 5.04 Data sum	maries		
Describes data tables and graphs	Summarizes experimental data using multiple formats	Develops outlines and formats for data summaries	Critiques data summaries
Sub-Competency 5.05 Application	on of research findings to current	research	
States OH's research findings	Examines the OH's research data to determine its	Implements integration of internal and external research	Oversees integration of internal and external research findings into revised research

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
	significance in the context of the scientific literature	findings into OH's research practices	agenda, objectives, and/or experimental strategies	
Competency 6 Dissemination of	research findings: disseminates r	esearch findings		
Sub-Competency 6.01 Meeting a	and conference presentations			
Attends institutional scientific presentations	Presents research to colleagues within the organization or via poster at external event	Presents research via oral presentation for disciplinewide audiences	Serves as an invited speaker at external meetings and conferences	
Sub-Competency 6.02 Manuscri	pt preparation			
Assists in manuscript drafting and editing	Drafts sections of research manuscripts	Publishes as first author or senior author in journals of the discipline	Publishes as senior author for multi-OH or multi-institutional research projects or in high-impact interdisciplinary journals	
Sub-Competency 6.03 Manuscri	pt peer review process			
Reads drafts of manuscripts submitted for peer review	Informally critiques manuscripts submitted for peer review	Participates in the peer review process as a formal reviewer	Participates in the manuscript peer review process as member of the editorial board	
Competency 7 Translation: trans	slates research findings to public	health practice		
States research findings as they relate to current public health practices	Describes implications of research findings on public health practices	Directs translation of research findings to public health practices	Oversees translation of research discoveries into meaningful changes in public health practices	
Domain: One Health Leadership				
Competency 1 Shared Vision: Ar	rticulate a shared mission, set of o	core values, and vision to achieve	OH goals	
Sub-Competency 1.01 Mission,	vision, and core values			
Identify and articulate the content, purpose, and value of mission and core values statements	Facilitate mission and core values statement development	Facilitate reassessment and adaptation of core values and mission to vision	Communicate effectively to translate understanding of core values, mission and vision into action	
Sub-Competency 1.02 Strategic	Sub-Competency 1.02 Strategic Planning			
Identify and articulate the purpose of strategic vision and planning	Develop and articulate a strategic vision and plan	Encourage and support others to share the strategic vision and plan	Identify and incorporate innovative concepts and methods into strategic vision, planning and decision making	
Competency 2 Collaborative Solutions: Utilize collaborative methods and skills of negotiation and conflict management across sectors and disciplines to facilitate cooperation in working together to address challenges and achieve OH goals.				

Sub-Competency 2.01 Interprofessional and intersectoral collaboration

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Describes the value of collaboration in the workplace	Collaborates with team members within a OH program	Leads cross-functional teams to accomplish projects	Creates a workplace environment that encourages teamwork and collaboration
Sub-Competency 2.02 Communi	cation, negotiation, and conflict r	management	
Employs active communication skills	Communicates information and feedback to colleagues and management staff	Ensures the open and frequent exchange of communication between OH staff	Fosters a culture of open and frequent communication
Competency 3 Team Commitme	nt: Motivate, coach, mentor, and	mobilize the OH team to work to	gether to achieve OH goals.
Sub-Competency 3.01 Staff enga	gement		
Participates in activities to support the OH's goals	Implements activities that support staff engagement	Develops programs that support a culture of staff engagement	Fosters a culture of staff engagement and commitment
Sub-Competency 3.02 Staff reco	gnition and professional develop	ment	
Participates in staff recognition and professional development programs	Evaluates the effectiveness of staff recognition and professional development programs	Develops staff recognition and professional development programs	Fosters a culture that ensures staff recognition and professional development
Sub-Competency 3.03 Coaching	and mentoring		
Describes the benefits of coaching and mentoring	Develops a pool of potential coaches and mentors for staff	Establishes coaching and mentoring programs	Fosters a culture where coaching and mentoring are deeply-rooted
Competency 4 Professionalism:	Apply ethical principles and profe	ssional code of conduct in leaders	ship of OH programs.
Sub-Competency 4.01 Ethical pro	actices and professional code of c	onduct	
Applies ethical principles and a professional code of conduct to the workplace	Serves as a role model of ethical and professional behavior by consistently conforming to the highest standards and practices	Ensures staff compliance with the policies and procedures related to ethical practices and a professional code of conduct	Fosters the policies, processes, and procedures related to ethical practices and a professional code of conduct
Sub-Competency 4.02 Diversity	culture		
Explains the value of having a diverse workforce	Promotes a diverse workforce	Develops programs that support a culture of diversity	Fosters a culture where diversity is valued
Domain: One Health Manageme	nt		
Competency 1 General management: Ensures sound management of OH organizational operations			
Sub-Competency 1.01 Organizat	ional structure		
Describes the organizational structure of the OH	Coordinates OH program structure to meet organizational needs	Adapts organizational structure to meet the mission and directives for OH programs	Oversees a process† to ensure organizational structure meets the mission and directives for OH program
Sub-Competency 1.02 Laws and	regulations for OH operation		

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Complies with laws and regulations related to OH operations	Coordinates program activities according to laws and regulations related to OH operations	Manages OH programs consistent with laws and regulations related to OH operations	Ensures that OH programs are consistent with federal, state, and local laws and regulation
Sub-Competency 1.03 Technical	operations management		
Works collaboratively on technical and operational planning	Implements technical and operational plans	Develops processes and procedures to manage technical operations	Oversees the policies, processes, and procedures related to the development and evaluation of technical operation
Sub-Competency 1.04 Internal p	oolicy implementation		
Complies with documented internal policies and guidelines	Implements internal policies for a OH program	Ensures staff compliance with OH-wide policies	Oversees internal policy implementation and staff compliance
Competency 2 Program Manage	ement: Plan, Design, Implement, N	Monitor, and Evaluate OH Program	ns
Sub-Competency 2.01 Program	Planning and Design		
Contribute to an outbreak response, prevention, and surveillance program plan and design	Develop outbreak response, prevention and surveillance program plan and design	Direct the management of outbreak response, prevention, and surveillance program planning and design	Oversee outbreak response, prevention, and surveillance program planning and design across OH
Sub-Competency 2.02 Program	Implementation		
Uses basic project management concepts and tools	Trains staff on project management techniques	Directs the management of projects at the programmatic level	Oversees project management across the OH
Sub-Competency 2.03 Program	Monitoring and Evaluation		
Contributes data for program effectiveness monitoring and evaluation	Analyzes data to assist in the monitoring and evaluation of program effectiveness	Directs activities to monitor and evaluate the effectiveness of OH programs	Oversees the policies and procedures regarding the measurement, analysis, and improvement of program effectiveness
Competency 3 Financial manage	ement: Ensures sound OH financia	l management	
Sub-Competency 3.01 Budgets,	income, and expenditures		
Complies with budgetary guidelines	Monitors staff compliance to the budget	Reconciles budget, expenditures, and income	Oversees budgets, including development and staff compliance with agency and legislative mandate
Sub-Competency 3.02 Financial	management		
Uses designated financial management tools	Integrates financial management tools for a OH program	Optimizes the financial management system for the OH	Oversees the policies, processes, and procedures related to financial management and fiduciary responsibility

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Sub-Competency 3.03 Resource management				
Uses workplace resources efficiently	Optimizes use of OH program resources	Manages resources for the OH	Oversees the policies, processes, and procedures related to resource management	
Competency 4 Human resource	management: Ensures effective n	nanagement of human resources	for OH	
Sub-Competency 4.01 Human re	esource policies			
Complies with human resource rules and requirements	Enforces human resource requirements and policies	Manages human resource requirements and policies	Oversees the policies, processes, and procedures related to the human resource system	
Sub-Competency 4.02 Performa	nce review			
Describes how the formal performance appraisal process impacts OH operations	Administers performance appraisals	Evaluates effectiveness of the performance appraisal process in improving OH productivity and practice	Oversees the continuous improvement of the performance management system	
Sub-Competency 4.03 Conflict re	esolution			
Identifies the need for management intervention in conflict resolution	Resolves conflicts in a fair and equitable manner	Integrates mechanisms to support cooperation and manage conflict across the OH	Oversees the policies, processes, and procedures to ensure the fair and equitable resolution of conflicts	
Sub-Competency 4.04 Professio	nal development			
Participates in professional development activities	Recommends professional development activities	Assesses professional development gaps to ensure and support staff competency development	Oversees the policies, processes, and procedures to encourage and address professional development	
Competency 5 Emergency Prepared and outbreaks	aredness and Response: Ensure re	adiness to prepare and respond t	o emerging pandemic threats	
Describes emergency management policies and procedures	Operates within assigned roles when carrying out emergency management and response duties	Manages the emergency management and response plan at the programmatic level	Oversees OH-wide emergency management and response	
Domain: Systems Thinking				
Competency 1 Systems Thinking Principles: Describe the elements of complex problems and systems thinking. Utilize wicked theory for systems thinking				
Describes systems thinking concepts, theories, and approaches (ie wicked theory)	Applies systems thinking concepts, theories and approaches to complex problems	Incorporates systems thinking concepts, theories, and approaches into program management and OH operations	Strategizes and creates innovative approaches to systems thinking in complex problems	
Competency 2 Systems Thinking Diagrams: Create and use systems mapping to deepen understanding of One Health problems.				

Develop a Causal Loop Diagram for systems thinking

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Describes systems mapping, diagrams, methods, and tools (ie causal loop diagram)	Applies systems thinking diagrams to identify elements of OH problem and map integration points	Incorporates findings of systems thinking diagrams into program management and OH operations	Strategizes and creates innovative approaches to OH operations and policies using systems thinking diagrams
	g Partnerships: Partner with One H thinking and tools. Develop interp		
Identifies stakeholders, disciplines, and sectors using systems thinking tools)	Collaborates with external stakeholders to integrate information and actions across disciplines and sectors using systems thinking tools	Evaluates gaps in engagement with external stakeholders to support the activities of the OH	Develops strategies to engage external stakeholders to accomplish the mission, vision, and activities of the OH
Domain: One Health Collaborat	ion and Partnership		
Competency 1 Promote inclusion other relevant disciplines	n of representatives of diverse co	nstituencies across human, anima	al, environmental health and
Sub-Competency 1.01 Demonst	rate cultural awareness and unde	rstanding of diversity	
Define cultural awareness and diversity within an OH organizational context	Implement cultural awareness in daily interactions with all stakeholder	Design strategies that support engagement of diverse stakeholders	Evaluate and promote structures that support engagement of diverse stakeholders
Sub-Competency 1.02 Promote	diversity and inclusion with the o	rganization	
Describe and document opportunities to promote diversity and inclusion	Promote cultural awareness and diversity within an OH organization	Identify gaps in cultural awareness and diversity	Develop and promote strategies to address gaps within the organization
Competency 2 Work with indivi	duals of other professions to main	ntain a climate of mutual respect	and shared values
Sub-Competency 2.01 Maintain	definition and demonstration of	mutual respect and shared values	
Define mutual respect and shared values in a professional, OH setting	Reinforce definitions of mutual respect and shared values amongst all stakeholders	Design systems and structures to ensure development of mutual respect and understanding	Evaluate and promote organizational definitions of mutual respect and understanding
Sub-Competency 2.02 Consister	nt engagement of other profession	nals with mutual respect and shar	ed values
Respectfully engage with all stakeholders and implement feedback on engagement	Support development of consistent engagement that aligns with organizational definition of respect and shared value	Identify gaps in engagement and provide feedback	Design feedback mechanisms to identify gaps in engagement
Competency 3 Use the knowledge of one's own role and those of other professions to appropriately assess and address the needs of the organization and populations served.			
Sub-Competency 3.01 Develop	a clear definition of one's role wit	hin an organization	
Define individual roles and responsibilities	Identify how roles and responsibilities support the goals of the organization	Provide feedback on the roles and responsibilities	Expand or diminish role based on organizational needs

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Sub-Competency 3.02 Develop a	a clear definition of other roles wi	thin an organization		
Define the roles and responsibilities of other individuals within organization	Identify how other roles support the goals of the organization	Provide feedback on other roles and responsibilities	Expand or diminish roles and responsibilities of other positions based on the needs of the organization	
Sub-Competency 3.03 Identify v	vho can meet a specific need base	d on role		
Identify individual whose roles and responsibilities can meet a need	Communicate with individual who can support a need	Promote communication between individual within the organization	Develop an organizational chart with clearly defined structure	
Competency 4 Communicate wi strengthening OH systems and t		e and responsible manner that sup	pports a team approach to the	
Sub-Competency 4.01 Utilize an	external communications policy	to engage stakeholders		
Consistently and correctly use communication protocols	Promote consistent and correct use of communication protocols	Provide clear, specific feedback on individual use of policies and organizational gaps in communication	Develop strategies and policies to engage diverse stakeholders to promote and strengthen OH	
Sub-Competency 4.02 Advocate	for OH policies in engagement w	ith external stakeholders		
Define OH policies to external stakeholders	Identify external stakeholders who could strengthen and promote OH systems	Communicate and promote OH policies with external stakeholders	Develop policies for external stakeholders to incorporate OH policies into their work	
Domain: One Health Communic	ation and Informatics			
Competency 1 Communication	echniques: deploys formal writte	n and oral communication strateg	gies	
Sub-Competency 1.01 Written of	ommunication			
Identifies key messages for written communication	Applies logical structure to written communications	Incorporates tools to organize and present detailed or complex information	Establishes content, style, tone, and form for written messages according to target audience	
Sub-Competency 1.02 Oral com	munication			
Identifies key messages for oral communication	Applies language and tone in oral communications tailored to target audience	Selects communication methods tailored to target audience	Establishes content, style, tone, and form for oral messages tailored to target audience	
Competency 2 Active listening s	kills: displays active listening skill	s when interacting with others		
Sub-Competency 2.01 Dialogue exchange				
Provides undivided attention to the other participants in a dialogue	Summarizes the dialogue to show understanding	Provides feedback based on the dialogue summary	Facilitates dialogue exchange through paraphrasing and clarification of critical points	
Sub-Competency 2.02 Contextu	al clues			
Exhibits open posture and facial expression to engage the	Applies range of body language cues to enhance the exchange	Exhibits active listening during the dialogue exchange	Incorporates multiple behaviors of engagement during dialogue exchanges	

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
other participants in a dialogue				
Sub-Competency 2.03 Respectfu	ıl exchange			
Defers judgment during dialogue exchanges	Provides counterpoints while being respectful of disagreements	Coaches others in techniques of respectful exchange	Facilitates respectful dialogue among participants in the exchange	
Competency 3 Comprehension of	of materials: demonstrates compr	ehension of written documents a	nd directions	
Follows written directions	Applies knowledge acquired from written text to situations	Adapts concepts from written text for use in new situations	Extrapolates information from written text to develop new ideas that enhance work processes	
Competency 4 Communication t	echnology: utilizes technology to	communicate information to inte	ernal and external partners	
Describes employer's policies and procedures for sharing information	Uses designated technology for sharing information	Manages technology policies and procedures used for sharing information	Evaluates the effectiveness of the technology used for sharing information	
Competency 5 Communication	professionalism: ensures profession	onalism in communication with cu	stomers and stakeholders	
Sub-Competency 5.01 Profession	nal attitude			
Uses tone of voice and language tailored to interactions with customers and stakeholders	Displays professional demeanor in all situations with customers and stakeholders	Monitors interactions with customers and stakeholders to ensure they are conducted professionally	Establishes policies for professional customer and stakeholder interactions	
Sub-Competency 5.02 Informati	on exchange			
Provides information based on policies and procedures to meet the needs of customers and stakeholders	Determines information needs through collaboration with customers and stakeholders	Ensures that information exchange policies, processes, and procedures are followed to meet the needs of the customers and stakeholders	Develops overarching system for exchange of information to meet the needs of customers and stakeholders	
Sub-Competency 5.03 Informat	ion sharing opportunities			
Shares information as directed	Selects information to share	Develops information to share	Creates opportunities for sharing information	
Competency 6 Professional repo	orts: prepares professional writte	n reports and oral presentations		
Sub-Competency 6.01 Written re	eports			
Organizes information for written reports	Creates drafts of written reports	Revises written reports	Establishes policies, processes, and procedures for written reports	
Sub-Competency 6.02 Oral presentations				
Organizes information for oral presentations	Creates drafts of oral presentations	Revises oral presentations	Establishes policies, processes, and procedures for oral presentations	
Competency 7 Risk communication: applies emergency and risk communication principles and techniques to explain information to targeted audiences				

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT		
Sub-Competency 7.01 Risk com	munication plan				
Describes the risk communication process	Adheres to the risk communication plan	Ensures staff compliance with the risk communication plan	Establishes policies, processes, and procedures related to the risk communication plan		
Sub-Competency 7.02 Emergence	cy information				
Lists basic emergency information for target audience	Identifies specific emergency information for target audience	Develops emergency information and messages tailored to target audience	Collaborates with agency leaders and partners to deliver emergency information and messages tailored to target audience		
Sub-Competency 7.03 Empather	tic risk communication				
Describes empathetic risk communication concepts	Delivers empathetic messaging in high-risk situations or emergencies	Creates empathetic messaging in high-risk situations and emergencies	Evaluates empathetic messaging for high-risk situations and emergencies		
Competency 8 Public health value	ue: promotes the value of the pub	lic health			
Sub-Competency 8.01 Public rel	ations				
Describes impact of the work of the public health and system	Coordinates opportunities for promoting the public health and system	Identifies opportunities to promote the public health and system	Develops opportunities to promote the public health and system		
Sub-Competency 8.02 Commun	ication to educate and inform				
Supports the development and distribution of communication materials about the public health	Presents communication materials to explain the importance of the public health	Develops communication materials to explain the importance of the public health	Manages the policies, processes, and procedures regarding communication materials to explain the importance of the public health		
Sub-Competency 8.03 Storytelli	ng				
Shares approved public health stories	Incorporates use of stories when communicating the impact of public health work	Develops stories that convey information highlighting the impact of public health work	Evaluates the impact of storytelling in promoting the public health		
Competency 9 Media relations: issues	works with the media to provide	information about public health l	aboratories and public health		
Sub-Competency 9.01 Media re	lations policies and strategies				
Adheres to agency media relations policies and procedure	Identifies situations where agency media relations policies and strategies apply	Monitors the application of agency media relations policies and strategies	Oversees media relations policies and strategies		
Sub-Competency 9.02 "Plain tal	Sub-Competency 9.02 "Plain talk"				
Describes the value of using "plain talk"	Applies "plain talk" during public and media interactions	Develops "plain talk" language for media and public communications	Translates highly technical concepts using "plain talk" for media and public communications		

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Sub-Competency 9.03 Key messages				
Describes the value of using key messages	Applies key messages during public and media interactions	Develops key messages for media and public communications	Oversees delivery of key messages on complicated, high-risk topics	
Domain: Gender, One Health, ar	nd Infectious Disease Managemer	nt		
Competency 1 Gender Awarene	ss: Demonstrate awareness of ge	nder dynamics in emerging pande	emic threats (EPT)	
Understand gender definitions and concepts including gender concepts related to sex, gender norms, gender roles, equity, equality and life cycle in relation to EPT	Understand the relationships between gender inequality, gender norms, and health and wellbeing	Understand gender transformative approaches to address gender equity in response to EPT	Advocate and promote gende equality and equity in response to EPT	
Competency 2 Gender Analysis:	Evaluate how gender intersects v	vith emerging pandemic threats		
Identify basic principles and related concepts of gender and EPT epidemiology, disease transmission, and the response cycle (preparation, detection, response, and evaluation).	Utilize gender analysis tools in EPT disease surveillance, response, prevention and control	Analyze how gender impacts and is impacted by EPT through conducting gender analysis and systemic monitoring and evaluation	Report and use gender- relevant lessons learned including gender best practices in EPT and resources to address those gaps and apply findings for subsequent program adaptation	
Competency 3 Gender Response	e: Develop gender-sensitive respo	nse plans for emerging pandemic	threats	
Sub-Competency 3.01 Gender H	ealthcare: Provide gender-sensiti	ve interdisciplinary healthcare for	EPT	
Identify relevant Sex and Gender Specific Health epidemiology, pathophysiology, clinical presentation, and therapeutic response	Apply SGSH considerations in clinical decision making and patient care	Incorporate SGSH in scientific inquiry and research design	Teach SGSH information to others (peer health professionals or patients)	
Sub-Competency 3.02 Gender H	ealthcare Education: Integrate ge	nder and EPT into interdisciplinar	y healthcare education	
Integrate gender and EPT into healthcare education at a basic level by including a limited focus on gender through women's reproductive health and EPT	Integrate gender and EPT into healthcare education at a mid level by including gender and EPT in a lecture series or guest lecture	Integrate gender and EPT into healthcare education at a high level by incorporating gender and EPT into curriculum and including specialized certificate programs	Integrate gender and EPT into healthcare education at an advanced level by incorporating gender and EPT into curriculum for interprofessional health education and exports expertise to national level	
Sub-Competency 3.03 Gender P	rogram: Develop gender-sensitive	programming for EPT		
Recognize impacts of gender- sensitive programming for responding to EPT	Develop Gender Sensitive programs that adapts to gender norms, work around existing gender differences and inequalities to ensure equitable	Develop Gender Responsive programs that challenge inequitable gender norms and respond to the different needs and constraints of individuals based on their gender and	Develop Gender Transformative programs that change inequitable gender norms and relations to promote equality, demonstrating both the	

DECIMINED	INTERNACIONATE	ADVANCED	EVENT	
BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
	aligned with the pre-existing gender differences, structures,	discussing, challenging, and engaging with inequitable	and the resources, willingness and capacity to institutionalize	
	systems, and power divisions	gender structures, systems,	transformative programming.	
	in society.	divisions, and power relations.		
Sub-Competency 3.04 Gender P	olicy: Develop gender-sensitive po	olicies and frameworks for the he	alth sector and EPT	
Recognize impacts of policy on promoting gender equality in response to EPT	Implement gender policies that attempt to target both women and men effectively, working within existing gender divisions of resources and responsibilities	Develop gender specific policies that respond to gender specific needs, working within existing gender divisions of resources and responsibilities	Advocate and ensure implementation of gender redistributive policies intended to transform existing distributions to create a more balanced relationship between men and women	
Domain: One Health Policy and	Advocacy			
Competency 1 Political Process:	Demonstrate Awareness of the O	H Political Process		
Explain the basic principles and concepts of OH policy and advocacy	Explain the process of developing and implementing OH policy and advocacy	Explain the process of analyzing and evaluating OH policy and advocacy	Explain the process of collaboration with various stakeholders in OH policy and advocacy	
Competency 2 Policy Analysis: A implementation	nalyze OH Policy and identify the	different challenges involved in c	development and	
Sub-Competency 2.01 Situation	Analysis			
Describe situation analysis and application to OH policy and advocacy	Conduct a situation analysis to identify policy problems that affect OH issues	Oversee a situation analysis and integrate findings into OH programming	Develop OH policy and advocacy to address findings of a situation analysis	
Sub-Competency 2.02 Stakehold	der Analysis			
Describe stakeholder analysis and application to OH policy and advocacy	Conduct a stakeholder analysis to identify policy problems that affect OH issues	Oversee a stakeholder analysis and integrate findings into OH programming	Develop OH policy and advocacy to address findings of stakeholder analysis	
Sub-Competency 2.03 Quality In	nprovement			
Explain strategies for continuous quality improvement for OH policy and advocacy	Apply strategies for continuous quality improvement for OH policy and advocacy	Implement strategies for continuous quality improvement for OH policy and advocacy	Develop strategies for continuous quality improvement for OH policy and advocacy	
Sub-Competency 2.04 Public Health Informatics				
Describe how public health informatics is used in developing, implementing, and improving OH policy and advocacy	Use public health informatics to develop, implement, and improve OH policy and advocacy	Assess the use of public health informatics to develop, implement, and improve OH policy and advocacy	Strategize OH policy and advocacy plans to address findings of public health informatics	
Competency 3 Policy Developme	ent: Plan, design, develop and im	plement OH Policy		
Sub-Competency 3.01 Strategic Planning				

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Describes organizational strategic plan	Contributes to the development of the organizational strategic plan	Leads development of the organizational strategic plan	Integrates current and projected trends into organizational strategic plan	
Sub-Competency 3.02 Developm	nent			
Describes options of OH Policy and Advocacy	Examines feasibility and implications of OH policy and advocacy	Recommends approach to OH policy and advocacy	Selects approach to OH policy and advocacy	
Sub-Competency 3.03 Implemen	ntation			
Understand how OH policies, regulations and guidelines are developed and implemented	Develop and deliver a policy brief that addresses OH policy in relation to other global health challenges	Manage implementation and integration of OH policy into programming	Analyze the effects of regional and local policies, economics and culture on One Health issue	
Competency 4 Organizing and N	legotiation: Organize national and	l international stakeholders in neg	gotiating for OH policy	
Sub-Competency 4.01 National	Agencies			
Identify national agencies that create and oversee policies, guidelines, and regulations that affect OH issues	Develop an advocacy plan for a OH issue that would address different stakeholders and decision makers at the national level	Advocate across multiple agencies and organizations at a national level for a position on a OH issue	Facilitate collaborations among various stakeholders at the national level in OH Policy Advocacy	
Sub-Competency 4.02 Internation	onal Agencies			
Identify international agencies that create and oversee policies, guidelines, and regulations that affect OH issues	Develop an advocacy plan for a OH issue that would address international level stakeholders and decision makers	Advocate across multiple agencies and organizations at an international level for a position on a OH issue	Facilitate collaborations among various stakeholders at the international level in OH Policy Advocacy	
	arketing: Utilize principles of social objectives, accomplishments, and		municate routinely with target	
Describe social marketing strategies for advocacy to achieve OH goals	Develop, implement, and evaluate advocacy, community education, and social marketing strategies to achieve OH goals and objectives	Manage OH advocacy and marketing teams and initiatives	Engage with high level stakeholders to advocate for OH needs and objectives	
Competency 6 Legislation and Regulation: Translate community and organizational analyses and plans into specific regulatory actions and legislative proposals for OH				
Describe regulatory actions and legislative proposals relevant to OH issues	Guide the community and organization in assisting and supporting legislative deliberation and action on OH issues	Manage OH advocacy and marketing teams and initiatives	Engage with high level policymaking bodies in legislative deliberation and action on OH issues	
Domain: Behavior Change (specific to One Health)				
Competency 1 Explain behavior change theories and change management concepts.				

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Explain the theories of behavior change and change management at individual and community level	Explain the theories of behavior change and change management in relation to One Health issues at individual and community level	Evaluate the theories of behavior change and change management at individual and community level	Evaluate the theories of behavior change and change management in relation to One Health issues at individual and community level	
Competency 2 Adapt and apply	models for individual behavior ch	ange to One Health contexts		
Sub-Competency 2.01 Identify in	ndividual health behaviors and he	alth behavior problems		
Describe assessment tools to identify individual health behaviors and health problems	Complete an assessment tool with an individual identify individual health behaviors and health problems	Interpret assessment results to identify individual health behaviors and health problem	Evaluate assessment process to identify areas where process could be improved	
Sub-Competency 2.02 Apply int	ervention/model to modify indivi	dual OH behaviors		
Describe various interventions/models that could be utilized to modify an individual health behavior	Identify a specific intervention/model that could be implemented to modify an individual OH behavior	Implement a specific intervention/model to modify an individual behavior	Evaluate the selection and implementation of an intervention /model	
Sub-Competency 2.03 Assess in	tervention/model impact on indiv	idual OH behaviors		
Identify tools to assess impact of an intervention/model on an individual OH behavior	Complete an assessment of the impact of an intervention/model on an individual OH behavior	Interpret assessment results to identify the efficacy of an intervention/model on an individual OH behavior	Identify an additional or alternative intervention/model on an individual OH behavior	
Sub-Competency 2.04 End inter	vention/model impact on individu	ual OH behavior and plan for long	-term maintenance	
Identify steps needed to end interventions describe plans for long-term maintenance can be support	Implement steps for ending interventions and plans for long-term maintenance	Evaluate long term maintenance plan for efficacy on ensuring behavioral change	Oversee and provide feedback on the intervention and long-term maintenance plane	
Competency 3 Adapt and apply	models for community behavior	change to One Health contexts		
Sub-Competency 3.01 Identify of	ommunity health behaviors and h	nealth behavior problems		
Describe assessment tools to identify community health behaviors and health problems	Complete an assessment tool with an individual identify community health behaviors and health problems	Interpret assessment results to identify community health behaviors and health problems	Evaluate assessment process to identify areas where process could be improved	
Sub-Competency 3.02 Apply int	ervention/model to modify comm	nunity OH behaviors		
Describe various interventions/models that could be utilized to modify a community health behavior	Identify a specific intervention/model that could be implemented to modify a community OH behavior	Implement a specific intervention/model to modify a community behavior	Evaluate the selection and implementation of an intervention /model	
Sub-Competency 3.03 Assess intervention/model impact on community OH behaviors				
Identify tools to assess impact of an intervention/model on a community OH behavior	Complete an assessment of the impact of an intervention/model on a community OH behavior	Interpret assessment results to identify the efficacy of an intervention/model on a community OH behavior	Identify an additional or alternative intervention/model on a community OH behavior	

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Sub-Competency 3.04 End intervention/model impact on community OH behavior and plan for long-term maintenance				
Identify steps needed to end interventions describe plans for long-term maintenance can be support	Implement steps for ending interventions and plans for long-term maintenance	Evaluate long term maintenance plan for efficacy on ensuring behavioral change	Oversee and provide feedback on the intervention and long-term maintenance plan	
Domain: Culture, Beliefs, Value	and Ethics (specific to One Healt	h)		
	efs: Demonstrate cultural compete eliefs and culture about human, ar		ng, interpreting and addressing	
Sub-Competency 1.01 Cultural of	competence and Gender			
Describe cultural norms, wisdom, and beliefs, of the community and of oneself, about gender in relation to OH	Implement OH initiatives that are sensitive and responsive to cultural norms, wisdom, and beliefs about gender	Manage and train OH staff to ensure cultural competence in gender and OH	Direct strategy, policy, or research to promote cultural competence in gender and OH	
Sub-Competency 1.02 Cultural of	competence and Animals			
Describe cultural norms, wisdom, and beliefs, of the community and of oneself, about animals in relation to OH	Implement OH initiatives that are sensitive and responsive to cultural norms, wisdom, and beliefs about animals	Manage and train OH staff to ensure cultural competence in animals and OH	Direct strategy, policy, or research to promote cultural competence in animals and OH	
Sub-Competency 1.03 Cultural of	competence and Environment			
Describe cultural norms, wisdom, and beliefs, of the community and of oneself, about the environment in relation to OH	Implement OH initiatives that are sensitive and responsive to cultural norms, wisdom, and beliefs about the environment	Manage and train OH staff to ensure cultural competence in the environment and OH	Direct strategy, policy, or research to promote cultural competence in the environment and OH	
	and Trust: Generate trust among trofessional standards, transparen		nrough actions based on the	
Sub-Competency 2.01 Compete	nce and Standards of Practice			
Describe the ethical, scientific, and professional standards of practice in OH	Implement OH initiatives according to ethical, scientific, and professional standards of practice	Oversee OH initiatives to ensure ethical, scientific, and professional standards of practice, identify and reform inadequate practice	Design standards of practice and processes to ensure accountability to the highest ethical, scientific, and professional standards in OH	
Sub-Competency 2.02 Transpare	ency and Accountability			
Describe full transparency in OH decision making, disclosure of conflict of interests, and admitting unintended program consequences	Demonstrate full transparency in OH decision making, disclosing conflicting interests, and admitting unintended program consequences	Oversee and hold OH programs and staff accountable to transparency, disclosure of conflict of interests, and revealing unintended program consequences	Lead OH initiatives with full transparency, disclosure of conflict of interests, and admission of unintended program consequences	
	nal Ethics and Personal Values			

	<u> </u>		
BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Identify and reflect on personal values in relation to the professional code of ethics	Demonstrate professional ethics and personal values alignment in OH Interventions	Ensure professionalism of staff implementing OH Interventions	Guide a culture of professional ethics informing all OH Interventions
Competency 3 Health and Safet and well-being in OH initiatives	y: Prevent, minimize, and mitigat	e health harms and promote and	protect public safety, health,
Sub-Competency 3.01 Protection	ns for human subjects' research		
Discuss the risks to and importance of protections for humans involved in research for OH	Implement OH human subjects research in compliance with Institutional Review Board procedures	Oversee and train OH staff in human subjects' research in compliance with Institutional Review Board procedures	Direct OH human subjects research in compliance with Institutional Review Board procedures
Sub-Competency 3.02 Timelines	ss, ethical decision making, risk an	d benefit analysis	
Discerns the risk and benefits of the range of actions to be taken in OH initiatives for responding to an outbreak to protect the public safety	Acts in a timely manner to implement emergency response in OH initiatives according to the resources and mandate to protect the public safety	Prepares and trains OH staff in emergency response plans to protect the public safety	Directs emergency response planning across OH programs to protect the public safety
Sub-Competency 3.03 Vulnerab	le populations		
Describes vulnerable populations and actions to prevent harm and promote safety through OH initiatives	Identifies vulnerable populations and implements actions to prevent harm and promote safety through OH initiatives	Manage and train OH staff to identify vulnerable populations and implement actions to prevent harm and promote safety in OH initiatives	Design and oversee OH programs to address the needs of vulnerable populations, prevent harm, and promote safety
		ibution of resources and social co ilities by individuals and communi	
Sub-Competency 4.01 Availabili	ty, Accessibility, Acceptability, an	d Quality of Health Service Delive	ry
Describes the issues of access, availability, acceptability, quality and barriers to public health services in relation to OH	Delivers OH services that are available, accessible, acceptable, and quality for all individuals and communities	Manage and train OH staff to implement services that are available, accessible, acceptable, and quality for all individuals and communities	Leads advocacy, policy, and research to address barriers and improve availability, accessibility, acceptability, and quality of OH services for all communities
Sub-Competency 4.02 Structura	l and Institutional Equity and Soci	al Determinants of Health	
Understands the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and structural and institutional factors influencing the use of health services in relation to OH	Implements OH interventions that address the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and structural and institutional factors influencing the use of health services	Manages and trains OH staff on the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and structural and institutional factors influencing the use of health services	Leads advocacy, policy and research on OH interventions to address the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and structural and institutional factors influencing the use of health

services

and interventions

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Competency 5 Interdependence and Solidarity: Foster positive, and mitigate negative, relationships among individuals, societies, and environments in ways that protect and promote the flourishing of humans, communities, nonhuman animals, and the ecologies in which they live.				
Identifies the relationship between humans, animals, and the environment on OH outcomes	Implements OH interventions that address the relationship between humans, animals, and the environment to promote OH outcomes	Manages and trains OH staff on the relationship between humans, animals, and the environment on OH and interventions to promote OH outcomes	Leads advocacy, policy, and research on the relationship between humans, animals, and the environment to inform OH interventions and promote OH outcomes	
	d Civil Liberties: Promote respect lomination in its many interperson		rmination, privacy, and the	
Sub-Competency 6.01 Equality a	and non-discrimination			
Explain that the right to health must be enjoyed without discrimination on the grounds of race, age, ethnicity, gender or any other status in relation to OH	Demonstrate equality and non-discrimination on the grounds of race, age, ethnicity, gender, or any other status in implementation of OH initiatives	Manage and train OH staff on equality and non-discrimination on the grounds of race, age, ethnicity, gender, or any other status in OH initiatives	Redress any discriminatory program or policy in relation to OH and advocate for equality for all individuals and communities served by OH initiatives	
Sub-Competency 6.02 Privacy a	nd confidentiality			
Explain the right to privacy and confidentiality of individuals and communities in relation to OH	Implement OH programs with respect for the right to privacy and confidentiality of individuals and communities served	Manage and train OH staff on the right to privacy and confidentiality of individuals and communities served by OH	Oversee and redress any breaches to privacy and confidentiality of individuals and communities served by OH initiatives	
Sub-Competency 6.03 Informed	Consent			
Explain the right to self- determination and the procedures for obtaining informed consent at the individual and group level in relation to OH initiatives	Implement OH initiatives with respect for self-determination by ensuring informed consent is obtained when necessary	Manage and train OH staff to respect self-determination and ensure informed consent is obtained when necessary	Oversee and redress any breaches to self-determination of individuals and communities served by OH initiatives	
Competency 7 Inclusivity and Engagement: Include and engage diverse publics, communities, and stakeholders to ensure informed decision making and promote diversity within OH programs and interventions				
Sub-Competency 7.01 Awareness of diversity as it applies to individuals and populations (eg, language, culture, values, socioeconomic status, geography, education, race, gender, age, ethnicity, sexual orientation, profession, religious affiliation, mental and physical abilities, historical experiences				
Describes the concept of diversity as it applies to individuals and populations in	Identifies diversity of individuals and populations within a community addressed	Recognizes the ways diversity influences OH policies, programs, and the health of a	Raises awareness of diversity as it applies to individuals and populations in OH programs	

community

OH programs and

interventions

by OH programs and

interventions

Sub-Competency 7.02 Diversity in the OH public health workforce

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT
Describes the value of a diverse OH public health workforce	Demonstrate the value of a diverse OH public health workforce	Advocates for a diverse OH public health workforce	Takes measures to support a diverse OH public health workforce
Domain: Principles of Public He	alth (related to One Health)		
Competency 1 Analyze factors of	of health that impact the health of	the human, animal, and environr	mental communities
Sub-Competency 1.01 Describe	the factors that affect the health	of the human, animal and environ	mental communities
Describe the factors that affect the health of the human, animal and environmental communities	Describe the factors that affect the health of the human, animal and environmental communities	Describe the factors that affect the health of the human, animal and environmental communities	Describe the factors that affect the health of the human, animal and environmental communities
Sub-Competency 1.02 Collect da	ata on factors that affect the healt	th of the human, animal and envir	onmental communities
Utilize data collection tools to gather quantitative and qualitative data on factors that affect human, animal and public health	Implement data collection tools to gather quantitative and qualitative data on factors that affect human, animal and public health	Develop data collection tools to gather quantitative and qualitative data on factors that affect human, animal and public health	Evaluate data collection tools to gather quantitative and qualitative data on factors that affect human, animal and public health
Sub-Competency 1.03 Utilize public health sciences to analyze data from on factors that affect the health of the human, animal and environmental communities			
Describes public health analysis of qualitative and quantitative data the health of the human, animal and environmental communities	Analyzes quantitative and qualitative data the health of the human, animal and environmental communities	Determines trends from quantitative and qualitative data the health of the human, animal and environmental communities	Identifies and resolves gaps in data the health of the human, animal and environmental communities
Competency 2 Implement polici Health	ies and programs in collaboration	with governmental and communi	ty organizations to support One
Sub-Competency 2.01 Understa related to implementation of O	nd the interrelationships among g ne Health programs	government authorities, policyma	kers, industry and researchers
Describe the interrelationships among government authorities, policymakers, industry and researchers related to implementation of One Health programs	Contribute to interrelationships among government authorities, policymakers, industry and researchers related to implementation of One Health programs	Manage the interrelationships among government authorities, policymakers, industry and researchers related to implementation of One Health programs	Develop and maintain interrelationships among government authorities, policymakers, industry and researchers related to implementation of One Health programs
Sub-Competency 2.02 Develop organizations	OH programs, policies and service	s in collaboration with governmen	ntal and community
Describe OH policy in collaboration with governmental and community organizations	Contribute to OH policy in collaboration with governmental and community organizations	Develop OH policy in collaboration with governmental and community organizations	Select OH policy in collaboration with governmental and community organizations from

Sub-Competency 2.03 Implement programs, policies and services in collaboration with governmental and community organizations to support One Health

implementation

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Describe implementation strategies for programs, policies and services in collaboration with governmental and community organizations to support One Health	Apply implementation strategies for programs, policies and services in collaboration with governmental and community organizations to support One Health	Manage implementation strategies for programs, policies and services in collaboration with governmental and community organizations to support One Health	Develop implementation strategies for programs, policies and services in collaboration with governmental and community organizations to support One Health	
Sub-Competency 2.04 Evaluate to support One Health	programs, policies and services in	collaboration with governmental	and community organizations	
Collect data for evaluation of in collaboration with governmental and community organizations to support One Health	Analyze evaluation data on programs, policies and services in collaboration with governmental and community organizations to support One Health	Provides feedback on based on evaluation data on programs, policies and services in collaboration with governmental and community organizations to support One Health	Re-design programs, policies and services in collaboration with governmental and community organizations to support One Health based on evaluation data	
Competency 3 Engage commun	ities in programs to improve OH s	ystems		
Sub-Competency 3.01 Commun	icate effectively with communitie	s to obtain input and feedback on	OH policies and programs	
Apply communication protocols and strategies form effectively with communities to obtain input and feedback on OH policies and programs	Manage communication protocols and strategies form effectively with communities to obtain input and feedback on OH policies and programs	Develop communication protocols and strategies form effectively with communities to obtain input and feedback on OH policies and programs	Evaluate communication protocols and strategies form effectively with communities to obtain input and feedback on OH policies and programs	
Sub-Competency 3.02 Incorpora cultures	Sub-Competency 3.02 Incorporate a variety of approaches to improving OH systems that respect diverse values, beliefs and cultures			
Implement strategies for incorporating diverse values, beliefs, and cultures into OH system development	Manage strategies for incorporating diverse values, beliefs, and cultures into OH system development	Develop strategies for incorporating diverse values, beliefs, and cultures into OH system development	Evaluate strategies for incorporating diverse values, beliefs, and cultures into OH system development	
Sub-Competency 3.03 Advocate for communities to ensure delivery of resources and conditions to improve OH systems				
Describe strategies for advocating communities to ensure delivery of resources and conditions to improve OH systems	Implement strategies to advocating communities to ensure delivery of resources and conditions to improve OH systems	Manage strategies to advocating communities to ensure delivery of resources and conditions to improve OH systems	Develop strategies to advocating communities to ensure delivery of resources and conditions to improve OH systems	
Domain: Surveillance				
Competency 1 Function of surveillance: recognizes the function of lab-based surveillance				
Describes the importance of lab-based surveillance	Explains the integration of public health lab testing into broader surveillance programs	Ensures selected lab testing and reporting procedures are aligned with surveillance activities and program requirements	Oversees the policies, processes, and procedures that ensure lab data will support public health surveillance activity and program requirements	

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Competency 2 Notification rules and regulations: complies with national and jurisdictional rules and regulations regarding notifiable results				
Describes notification rules and regulations	Reports data to leadership/policy makers	Manages the approval and communication of public health surveillance results	Contributes to determination of national, state, and local notification conditions	
Competency 3 Surveillance test	ing: performs outbreak or exposu	re detection		
Sub-Competency 3.01 Surveillar	nce testing systems			
Describes test sample collection, storage, and analytical requirements	Identifies the functional requirements of surveillance testing protocols	Creates surveillance testing protocols that include functional requirements	Directs development and modifications to surveillance testing systems based on jurisdictional guidance and analytical capabilities	
Sub-Competency 3.02 Outbreak	or exposure event detection			
Describes at least one definition of an outbreak or exposure event	Informs supervisor of potential outbreak or exposure event	Reports potential outbreak or exposure events to key stakeholders	Contributes to the modification of outbreak or exposure event recognition processes or definitions	
Sub-Competency 3.03 Testing for	or outbreak or exposure events			
Follows sample prioritization schema for testing during an outbreak or exposure event	Ensures that outbreak or exposure event samples are prioritized according to schema	Reports outbreak or exposure event testing results to key stakeholders	Represents the organization in After Action Reviews for outbreak or exposure events	
Competency 4 Response to criti	cal surveillance event: responds t	o critical surveillance events		
Sub-Competency 4.01 Critical ev	ent planning			
Describes critical event response processes and procedures related to surveillance	Applies critical event processes and procedures related to surveillance	Evaluates plans and After Action Review findings following critical events	Modifies the policies, processes, and procedures for critical surveillance events based on results of exercises or actual events	
Sub-Competency 4.02 Critical ev	Sub-Competency 4.02 Critical event response			
Describes own critical event response duties related to surveillance	Manages resources required to respond to critical events	Implements the critical event response plan	Oversees the activation and termination of the critical event response plan	
Sub-Competency 4.03 Coordination of response				
Describes the need to coordinate priorities	Communicates priorities to staff and management team	Coordinates activities during critical events to align with identified priorities	Ensures implementation of response plans during critical events	
Sub-Competency 4.04 New testing capabilities				
Identifies when current testing capabilities do not exist to test an analyte or organism	Applies technical knowledge to implement new testing capabilities	Develops plans to address testing capabilities for a specific new organism or	Determines the overall strategy for development of new testing capabilities during critical surveillance events	

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
		analyte during critical surveillance events		
Competency 5 Information for surveillance: recognizes vital information needed for surveillance				
Sub-Competency 5.01 Demograp	phic information			
Enters demographic information that is necessary to carry out surveillance activities	Communicates the required demographic information to submitters	Ensures submission of crucial demographic information by submitters	Determines demographic information fields required in informatics systems, requisition forms, and reports	
Sub-Competency 5.02 Sample in	formation			
Enters sample information that is necessary to carry out surveillance activities	Monitors the capture of sample information	Ensures collection of sample information	Determines policies, processes, and procedures for sample information collection based on jurisdictional requirements and guidelines	
Competency 6 Data analysis: an	alyzes data from surveillance			
Describes surveillance data analysis methods	Analyzes surveillance data	Interprets surveillance data	Develops standards for data analysis and for interpretation of surveillance data	
Competency 7 Data managemer	nt: manages public health surveill	ance data using secure data mana	gement systems	
Sub-Competency 7.01 Data colle	ection			
Conducts data entry	Determines validity and reliability of data collection instruments and methods	Ensures data collection system adheres to organization, local, and national standards	Coordinates modifications to data collection systems using state and national guidance and methods	
Sub-Competency 7.02 Data stora	age and retrieval			
Uses secure and stable data storage and retrieval systems	Ensures that the design of storage and retrieval databases include the necessary variables and data dictionary	Develops secure and stable data storage and retrieval systems, including creating new variables as necessary to support analysis of data	Develops standards for secure and stable data storage and retrieval	
Competency 8 Recognition of sig	gnificant results: recognizes signif	icant results in surveillance data		
Sub-Competency 8.01 Significant values and results				
Adheres to policies and procedures to verify significant results	Reports significant results with interpretation to management team and customers	Monitors significant results to ensure staff compliance with policies for reporting	Develops plans with customers to identify significant results in the population or environment	
Sub-Competency 8.02 Trends in data				
Sub-Competency 8.02 Trends in				

BEGINNER	INTERMEDIATE	ADVANCED	EXPERT	
Sub-Competency 9.01 Multidisc	Sub-Competency 9.01 Multidisciplinary teamwork			
Communicates approved information to other institutions	Implements the multi- disciplinary surveillance communication plan	Manages the multi-disciplinary surveillance communication plan	Develops a multi-disciplinary surveillance communication plan	
Sub-Competency 9.02 Education	Sub-Competency 9.02 Education and feedback for partners			
Explains sample requirements and surveillance procedures	Guides partners in selection of surveillance methods, data collection, and evaluation	Evaluates effectiveness and efficiency of surveillance processes and procedures between organization and partners	Develops surveillance policies, processes, and procedures with partners	
Competency 10 Dissemination of data: disseminates data relevant to audience				
Describes importance and use of oral and written communication in presenting surveillance and monitoring data	Reports surveillance and monitoring data orally or in writing to managers/policy makers and epidemiologists	Explains surveillance and monitoring data orally or in writing to external stakeholders	Synthesizes surveillance and monitoring data orally and in writing for national and international audiences for policy decision-making purposes	

## OHW EVALUATION TOOL FOR GENDER DOMAIN LEVELS 1-4

**Gender and One Health Evaluation Methods and Tools** 

Level 1: Reaction

Questionnaire: Satisfaction with Training in Gender and One Health 1819

Please rate how well each of the training goals was met. Use a scale from one to four (1 to 4) with one (1) being the lowest and four (4) being the highest. 5. Participants are more effective in their disciplines by being aware of gender dynamics and applying gender sensitive approaches to emerging pandemic prevention, disease control, surveillance and response. 6. Participants have the skills and knowledge to be effective agents of gender responsive One Health approaches. 7. Participants become transformative agents by promoting gender equality and equity in au aspects of their work and sharing this information with others. 8. Participants become gender trainers, helping to incorporate gender sensitive indicators and assessment tools in their courses as well as sharing information with other colleagues

<sup>18</sup> OCHEA, Gender and One Health Goals of the Training, https://airtable.com/tbl729wTUr9hZmGC7/viwAAAeWuPUPNIDk8?blocks=hide 19 IGWG, USAID, 2017, Participant Evaluation Form, https://www.igwg.org/wp-content/uploads/2017/05/EvaluationForm.pdf

Were the workshop materials clear and easy to understand?
Please tell us what you found most useful in the workshop and why.
How will you use the knowledge and skills gained from the workshop in your work?
now will you use the knowledge and skins gamed from the workshop in your work.
What types of follow-up (e.g., technical assistance) would be helpful to you?
How might we improve the workshop in the future?
now might we improve the workshop in the future:
Additional comments or suggestions:
Lovel 2. Learning
Level 2: Learning
2.1 Self-Assessment: Knowledge and Skill in Gender and One Health <sup>20</sup>
Self-evaluate your competency in Gender and One Health on a scale of 1 to 4 based on perceived knowledge
and skill
1 = None: I am unaware or have very little knowledge of the skill
2 = Aware: I have heard of, but have limited knowledge or ability to apply the skill
3 = Knowledgeable: I am comfortable with my knowledge or ability to apply the skill
4 = Proficient: I am very comfortable, am an expert, or could teach this skill to others
NR = Not relevant to my role
To what degree are you able to effectively
Gender Awareness
I. Identify basic gender principles and related concepts including sex, gender, gender roles, equity,
equality, and life cycle in relation to emerging pandemic threats. (B)
2. Contemplate the impact of cultural beliefs about gender and the impact of those beliefs on One
2. Contemplate the impact of cultural beliefs about genuel and the impact of those beliefs of Offe
Health and access to health care in emerging pandemic threats. (I)

threats. (A)

21. Recognize the impacts of gender sensitive policies for responding to emerging pandemic threats.

(B)

22. Implement gender policies that attempt to target both women and men effectively, working within	
existing gender divisions of resources and responsibilities. (I)	
23. Develop gender specific policies that respond to gender specific needs, working within existing gender	
divisions of resources and responsibilities. (A)	
24. Advocate and ensure implementation of gender redistributive policies intended to transform existing	
distributions to create a more balanced relationship between men and women. (E)	
Total Score (Add all scores and enter total here)	
Average Total (Divide the "Total Score" by 24 and enter the result here)	
Comments:	

# 2.2 Pre-Post Test: Knowledge and Attitude in Gender and One Health<sup>21</sup>

#### Knowledge<sup>22</sup>

Please complete the multiple choice questions below to assess knowledge of Gender and One Health.

- 1. Socially constructed gender roles and identities affect vulnerability to and experiences of an outbreak.
  - a. True
  - b. False
- 2. Disaggregating data by sex during outbreak investigation and response analysis is important for identifying:
  - a. Difference in infection rates between men and women
  - b. Difference in mortality rates between men and women
  - c. Biological and social factors contributing to outbreak
  - d. All of the above
- 3. Higher infection rates among women during outbreaks may be attributed to
  - a. Women's social responsibilities as caregivers
  - b. Women's weaker immune system in relation to men
  - c. Wrong data. Men and women are infected at equal rates
- 4. Inequalities between men and women is a result of
  - a. Special abilities that men have and women do not have.

<sup>21</sup> UNWOMEN, 2018, evaluation tool for training for gender equality, https://www.dropbox.com/preview/OHW- $NG\%20 (shared)/3.\%20 Competency\%20 Framework/Evaluation\%20 Tools/Gender/Evaluation\%20 Tool\_Training\%20 Gender\%20 Equality\_05-02-02 Gender/Evaluation\%20 Ge$ 18%20LA%20(1).pdf?role=personal

<sup>22</sup> UNWOMEN, 2018, evaluation tool for training for gender equality, https://www.dropbox.com/preview/OHW- $NG\%20 (shared)/3.\%20 Competency\%20 Framework/Evaluation\%20 Tools/Gender/Evaluation\%20 Tool\_Training\%20 Gender\%20 Equality\_05-02-100 Gender/Evaluation\%20 G$ 18%20LA%20(1).pdf?role=personal

c. all of the above

# Attitudes<sup>23</sup>

Opinion		Agree	Disagree
1.	Resources should be diverted to		
	outbreak response at the expense of		
	sexual and reproductive health		
2.	Women's role is to be caretakers in		
	society and women should care for the		
	ill during outbreaks even at risk to their		
	own health		
3.	A woman should not move out of the		
	domestic sphere. Her role is at home.		
4.	Distrust in the healthcare system		
	among women may be due to ways		
	women have been mistreated by male		
	healthcare providers in the past.		
5.	Gender equality threatens culture,		
	traditions, and identity. Gender roles		
	should remain as they are.		
6.	Giving rights to women takes away		
	rights from men.		
7.	Men should make the decisions in		
	outbreak response. A man's role is to		
	be the decision maker in society.		
8.	Women should have the right to		
	choose to start a family.		
9.	Women who are sexually assaulted are		
	usually to blame.		
10.	Effective outbreak response should		
	include data analysis disaggregated by		
	sex		

 $NG\%20 (shared)/3.\%20 Competency\%20 Framework/Evaluation\%20 Tools/Gender/Evaluation\%20 Tool\_Training\%20 Gender\%20 Equality\_05-02-02 Gender\%20 Gen$ 18%20LA%20(1).pdf?role=personal

# Level 3: Behavior

Direct Observation: Supervisor Observation of Behavior in Gender and One Health<sup>242526</sup>

Directly observe demonstrated competency in Gender and One Health on a scale of 1 to 4 based on frequency	су
of behavior and independence of performance	
5. None: Behavior is not demonstrated and/or task is not performed.	
6. Developing: Behavior is demonstrated occasionally and/or task is performed with supervision.	
7. Competent: Behavior is demonstrated frequently and/or task is performed independently.	
8. Mastery: Behavior is demonstrated consistently and/or task is performed and taught to others.	
NR = Not relevant to role	
To what degree does the learner demonstrate	
Gender Awareness	
1. Identify basic gender principles and related concepts including sex, gender, gender roles, equity, equality, and life cycle in relation to emerging pandemic threats. (B)	
2. Contemplate the impact of cultural beliefs about gender and the impact of those beliefs on One	
Health and access to health care in emerging pandemic threats. (I)	
3. Apply gender sensitive approaches to address gender dynamics in response to emerging pandemic	
threats. (A)	
4. Advocate and promote gender equality and equity in response to emerging pandemic threats. (E)	
Gender Analysis	
5. Identify basic principles and related concepts of gender and emerging pandemic threat	
epidemiology, disease transmission, and the response cycle (preparation, detection, response, and	
evaluation). (B)	
6. Utilize gender analysis tools in emerging pandemic threat disease surveillance, response,	
prevention and control. (I)	
7. Analyze how gender impacts and is impacted by emerging pandemic threats through conducting	
gender analysis and systemic monitoring and evaluation. (A)	
8. Report and use gender-relevant lessons learned including gender best practices in emerging	
pandemic threats and resources to address those gaps and apply findings for subsequent program adaptation. (E)	
Gender-Sensitive Healthcare	
9. Identify relevant Sex and Gender Specific Health epidemiology, pathophysiology, clinical	
presentation, and therapeutic response in relation to emerging pandemic threats (B)	
10. Apply sex and gender specific health considerations in clinical decision making and patient care in	
response to emerging pandemic threats (I)	
11. Incorporate sex and gender specific health in scientific inquiry and research design in response to	
emerging pandemic threats (A)	
12. Teach sex and gender specific health information to others (peer health professionals or patients)	
in relation to emerging pandemic threats (E )	
Gender-Sensitive Health Education	

 $<sup>24\</sup> A cademic\ health\ council,\ Interprofessional\ collaborator\ assessment\ rubric,\ file: ///C:/Users/janel/Downloads/ICAR.pdf$ 

 $<sup>25 \</sup> Public health nursing competency evaluation tool, https://www.nursing.umn.edu/sites/nursing.umn.edu/files/competencies-for-public-health-nursing-practice-for-public-health-nursing-public-health-nursing-public-health-nursing-public-health-nursing-public-h$ 

 $<sup>26\</sup> Clinical\ skills\ performance\ evaluation\ tool,\ http://www.ast.org/uploaded Files/Main\_Site/Content/Educators/ClinPerf\_ClinEval1.pdf$ 

13. Recognize the impacts of gender sensitive interdisciplinary health education for responding to emerging pandemic threats. (B)	
14. Integrate gender and EPT into healthcare education at a intermediate level by including gender and EPT in a lecture series or guest lecture (I)	
15. Integrate gender and EPT into healthcare education at an advanced level by incorporating gender and EPT into curriculum and including specialized certificate programs (A)	
16. Integrate gender and EPT into healthcare education at an expert level by incorporating gender and EPT into curriculum for interprofessional health education and exports expertise to national level	
Gender-Sensitive Programs	
17. Recognize the impacts of gender sensitive programming for responding to emerging pandemic threats. (B)	
18. Develop Gender Sensitive programs that adapts to gender norms, work around existing gender differences and inequalities to ensure equitable allocation/services/support aligned with the pre-existing gender differences, structures, systems, and power divisions in society. (I)	
19. Develop Gender Responsive programs that challenge inequitable gender norms and respond to the different needs and constraints of individuals based on their gender and sexuality, open space for	
discussing, challenging, and engaging with inequitable gender structures, systems, divisions, and power relations. (A)	
20. Develop Gender Transformative programs that change inequitable gender norms and relations to promote equality, demonstrating both the ambition to transform gender and the resources, willingness and capacity to institutionalize transformative programming. (E)	
Gender-Sensitive Policies	
21. Recognize the impacts of gender sensitive policies for responding to emerging pandemic threats. (B)	
22. Implement gender policies that attempt to target both women and men effectively, working within existing gender divisions of resources and responsibilities. (I)	
23. Develop gender specific policies that respond to gender specific needs, working within existing gender divisions of resources and responsibilities. (A)	
24. Advocate and ensure implementation of gender redistributive policies intended to transform existing distributions to create a more balanced relationship between men and women. (E)	
Total Score (Add all scores and enter total here)	
Average Total (Divide the "Total Score" by 24 and enter the result here)	

## 4. Level 4: Results

# 4.1 Program Evaluation Checklist: Program Quality in Gender and One Health<sup>27</sup>

Score the program on a scale of 1-4 for achievement of integrating gender into programs responding to					
emerging pandemic threats.					
1. Neutral	2. Sensitive 3. Responsive 4. Transformative				
Works with gender	Adapts to gender norms in Challenges inequitable Changes inequitable				
norms in response to response to emerging gender norms in gender norms and					

 $NG\%20 (shared)/3.\%20 Competency\%20 Framework/Literature\%20 review/Gender/Gender\%20 Evaluation\%20 Strategies\%20 and \%20 Tools/Organizational?preview=CARE\_Gender\%20 Evaluation\%20 Strategies\%20 Framework/Literature\%20 Frame$ 

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Comments:

emerging pandemic	pandemic threats. Works	response to emerging	relations to promote
threats. Reinforces and	around existing gender	pandemic threats.	equality in response to
may take advantage of	differences and inequalities to	Responds to the	emerging pandemic
pre-existing gender	ensure equitable	different needs and	threats. Demonstrates
inequitable structures,	allocation/services/support	constraints of individuals	both the ambition to
systems,	aligned with the pre-existing	based on their gender	transform gender and the
and divisions in society	gender differences, structures,	and sexuality, open	resources, willingness and
relating to gender.	systems, and power divisions	space for discussing,	capacity to institutionalize
Does not consider	in society.	challenging, and	transformative
how gender roles and		engaging with	programming in response
relations can impede		inequitable gender	to emerging pandemic
the achievement of		structures, systems,	threats.
programming		divisions, and power	
outcomes, or how		relations.	
programming can			
negatively affect			
gender roles and			
relations.			

# 4.2 Institutional Performance Checklist: Health Education Institution Performance in Gender and One Health<sup>28</sup>

Score the Education Institution on a scale of 1-4 for Institutional Readiness for Interprofessional Sex and Gender			
	n Education in Response to Emerging Pandemic Threats		
5. Basic	Institutions at this stage include women's health education in a limited fashion, often focusing solely on reproductive health. There are minimal or no interdisciplinary sexand gender-specific health programs within the institution's health sciences schools or colleges.		
6. Mid-level	Institutions at this stage have expanded women's health education outside of the reproductive arena. The curriculum includes sex- and gender-specific health education incorporated into more than 50 percent of the degree curriculum and, when applicable, clinical women's health education expands outside of the Obstetrics and Gynecology Department. Students might have an option to choose an elective in women's health. These institutions may have a designated NIH ORWH Women's Health Center of Excellence (COE) or Clinical Center of Excellence (CCOE).		
7. High-level	Institutions at this stage have integrated women's health education throughout the 4-		
	year curricula (when applicable) and into post-graduate training. The curriculum		

NG%20 (shared)/3.%20 Competency%20 Framework/Literature%20 review/Gender/Gender%20 Articles? preview=Womens+health+interprofessional+curricula+report. + hrsa. + 20 Framework/Literature%20 Framewor14.pdf

	includes an awareness of sex and gender as individual variables to be integrated throughout. These institutions may host women's health fellowships, women's health residency tracks, and specialized student certificate programs in women's health.
8. Advanced	These institutions established activities to promote interdisciplinary sex- and gender-specific women's health programs, schools and colleges in addition to interprofessional education across schools/colleges. They fully integrated women's health, and sex and gender, as a curricular thread throughout all levels of health professional education. They have avoided creating stand-alone curricula or modules, choosing instead to laye sex- and gender-specific women's health into existing curricula as appropriate.

#### References (for Gender assessment tool)

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- Gender mainstreaming in programs self-assessment, UNICEF, 2012: https://www.unicef.org/evaldatabase/files/EO 2007 Gender Mainstreaming Report.pdf
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#### **OUTBREAK INVESTIGATION AND RESPONSE - LEVEL II KNOWLEDGE ASSESSMENT**

Directions: You are a member of an administrative team at a rural health facility in the Democratic Republic of the Congo. Utilizing the following resources to develop an action plan for your facility in the event of an outbreak of the Ebola Virus Disease outbreak. Research additional resources to support the action plan if needed.

By completing the action plan, the learner should be able to demonstrate their ability to:

- Design a plan for preparing for an outbreak
- Conduct an outbreak investigation
- Define the roles and responsibilities of all stakeholders
- Develop methods for communicating with various stakeholder
- Develop a plan for returning to standard operating procedures

#### Action Plan Resources

- 1. Outbreak of Ebola virus disease in the Democratic Republic of the Congo, April—May, 2018: an epidemiological study
- 2. Ebola Virus Disease Testing & Shipping Instructions
- 3. Ebola virus disease Democratic Republic of Congo: external situation report 98/ 2020

- 4. Ebola Virus Disease (EVD) Evaluation Algorithm for Hospitals\*
- 5. Ebola (Ebola Virus Disease) for Clinicians
- 6. DRC Ebola Outbreak Crisis Update
- 7. Problem of the Management of Haemorrhagic Fevers: Experience of Ebola Virus Disease in the Province of North Kivu and Ituri (DR Congo) and the Importance of Early Diagnosis
- 8. 2017 Outbreak of Ebola Virus Disease in Northern Democratic Republic of Congo

# **Action Plan Step One Preparing for an Outbreak**

Develop a plan for preparing for an outbreak response that includes the following:

Describe the outbreak response plan. Describe the steps for the implementation of that plan.		
Describe the emerge	ancy rosponso drills ar	nd exercises training plan that will be implemented by your healthcare
	ency response urins ar	id exercises training plan that will be implemented by your healthcare
facility		
Describe the key na	rtners and their role in	n supporting the emergency response at your health facility.
	thers and then role ii	
Key Partner		Role in Emergency Response
DI C. T		
	Investigating an Outb	
		that includes the following:
What tools will be u	sed to monitor the ou	itbreak?
What camples will b	e collected? How will	they be collected to ensure the safety of stakeholders?
		·
Sample Type	Collection Procedure	

What is the cause of	the outbreak?		
Utilize the table belo	ow to develop a case definition		
Element	Descriptive Features	Examples	
Person	Age group		
	Sex		
	Occupation		
	Exclusion criteria		
	Race		
Place	Geographic Location		
	Facility		
Time	Illness Onset		
Clinical Features	Pnuemonia		
Laboratory Criteria	Cultures; serology		

# **Action Plan Step Three Outbreak Response Plan**

Develop a plan for responding to the outbreak that includes the following:

bevelop a plan for t	esponding to the outsteak that melades the following.		
Describe the comm	Describe the communication policies and guidelines for the following stakeholders.		
Intra-agency			
Employees			
Linployees			
Community			
Media			
Government			
Other			
Stakeholder			
Stakenoluei			
Describe the proce	edure for managing surge capacity.		
1			

Develop plan for returning to normal operating procedures that includes the following:

Describe the plan to return to standard operating procedures. Describe the steps for the implementation of that plan.

Design a survey for obtaining stakeholder feedback.

# Utilize the following rubric to assess the action plan

Criteria	1	2	3	4	Comments
Outbreak	Response plan is	Response plan is	Response plan is	Response plan	
response	limited, and the	limited but the	clear, but it	explains	
plan	implementation	implementation	limited in its	implementation	
	steps are unclear	steps are clear	response to	with clear steps	
			various situations	and plans for	
				various situations	
Emergency	Emergency drill	Emergency drills	Emergency drills	Emergency drills	
drills and	and exercises do	and exercises are	and exercises	and exercises	
exercises	not adequately	limited in	adequately	effectively	
	prepare	preparing	preparing	preparing	
	stakeholders for	stakeholders for	stakeholders for	stakeholders for	
	outbreak	outbreak	outbreak	outbreak	
	response	response	response	response	
Key partners	Identified key	Identified key	Identified key	Identified key	
and their	partners are not	partners can	partners can	partners can	
roles	supportive of the	support the	adequately	effectively	
	outbreak and	outbreak but their	support the	support the	
	their roles are not	roles are not	outbreak and	outbreak and	
	clearly defined	clearly defined.	their roles are	their roles are	
			clearly defined.	clearly defined	
Determining	The cause of the	The cause of the	The cause of the	The cause of the	
the cause of	outbreak is not	outbreak is	outbreak is	outbreak is	
the outbreak	supported by	supported by	supported by	supported by	
	evidence.	minimal evidence	sufficient	considerable	
			evidence.	evidence.	
Establishing a	The case	The case	The case	The case	
case	definition is not	definition is	definition is	definition is	
definition	clearly defined.	minimally	sufficiently	clearly defined.	
		defined.	defined.		
Collecting	The process for	The process for	The process for	The process for	
and testing	collecting	collecting samples	collecting samples	collecting samples	
samples	samples is	is limited and	is clear and poses	is clear and plans	
	unclear and poses	poses a few risks	minimal risks to	for risks to	
		to stakeholders.	stakeholders.	stakeholders.	

	risks to stakeholders.			
Communicati	Communications	Communications	Communications	Communications
on policies	policies are not	policies are clear	policies are clear	policies are clear
	clear or effective	and effective for	and effective for	and effective for
	for any	some	most	all stakeholders.
	stakeholders.	stakeholders.	stakeholders.	
Surge	The plan for surge	The plan for surge	The plan for surge	The plan for surge
Capacity	capacity is not	capacity is	capacity is flexible	capacity is flexible
	clear or flexible.	minimally flexible	but has limited	and has creative
		and limited in	strategies for	strategies for
		strategies.	management.	management.
Return to	Return plan is	Return plan is	Return plan is	Return plan
standard	limited, and the	limited but the	clear, but it	explains
operating	implementation	implementation	limited in its	implementation
procedures	steps are unclear.	steps are clear.	response to	with clear steps
			various situations	and plans for
				various situations
Survey	The survey design	The survey design	The survey design	The survey design
Design	is unclear and	is clear but	is clear and	is clear and
	does not provide	provides limited	provides	provides ample
	opportunities for	opportunities for	sufficient	opportunities for
	stakeholder	stakeholder	opportunities for	stakeholder
	feedback.	feedback.	stakeholder feedback.	feedback.

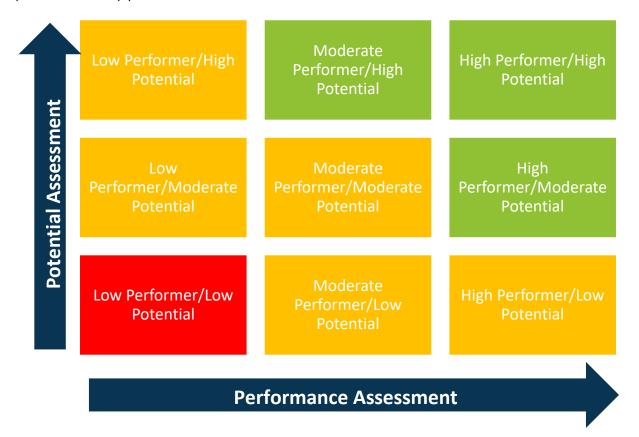
### OUTBREAK INVESTIGATION AND RESPONSE AND ONE HEALTH LEVEL THREE BEHAVIOR **ASSESSMENT**

The Nine Box Grid<sup>29</sup> can be used to assess an employee's performance on their daily responsibilities, meeting and achieving goals and completing the deliverables outlines in their job descriptions. It can also be used to assess an employee's potential for growth and their ability to move along the One Health capability maturation model competency framework. This behavioral assessment supports the identification of employees along a spectrum of performance and potential so as to identify any strategies or interventions needed. For example, supervisors can identify low performers who exhibit low potential and develop plans to support their improvement through targeted, competency-based interventions. Conversely, supervisors can identify high performers who exhibit high performance and high potential of provided supports such as mentoring or professional development to move them along the maturation model.

The color coding of the Nine Bix Grid supports the supervisor in the identification of employees and the strategies needed to support their behavior. Employees who fall within the red category require more intensive interventions that support both their ability to meet job performance goals as well as improve their potential for growth and willingness to learn in a position. Employees who fall within the yellow category will need more minimal

<sup>29 9</sup> Box Toolkit: How to Create & Use the 9 Box in Succession, Karen N. Caruso, Ph.D. https://cdn2.hubspot.net/hubfs/91252/viaPeople%209%20Box%20Toolkit.pdf?t=1490190540420

interventions that focus on building either their performance or potential. Employees who fall into the green category require supports or strategies that will continue to build their performance and potential to develop into possible leadership positions.



The rubric statements below can be used to measure an employee's competencies.

#### **Measurements for Performance Assessment**

Low	Moderate	High
Struggles to meet goals,	Consistently meets goals,	Exceeds goals, performance
performance expectations and	performance expectations and	expectations and complete
complete deliverable for their	complete deliverable for their	deliverable for their position
position	position	

#### **Measurement for Potential Assessment**

Low	Moderate	High
Keeps current skills up to date, but demonstrates little	Learns and applies new skills when the job calls for it;	Learns and adapts quickly and applies skills and lessons
effort to build new skills or apply lessons learned to increase performance.	applies lessons learned to enhance success.	learned to challenging situations.

Supervisors can assess an employee via the observational checklist below. For each competency and subcompetency, the employee's performance and potential should be rated either, L (Low), M (Moderate) or H (High). If the competency or sub-competency is not relevant to the employee's roles and responsibilities, the supervisor can put N/A. After completing the checklist, the supervisor can average the employee's score to identify where in the grid they fall, and which types of strategies are required to support their growth along the One Health maturation model competency framework.

Competency	Performance	Potential
Preparation for outbreaks or emergency events: Review investigation and		
outbreak management experiences for applying best practices		
Sub-Competencies		
Prepares for outbreak/emergency event		
Engages in emergency response training		
Identifies key partners		
Executes agreements with partners		
Engages outbreak/emergency preparedness and response network		
Competency		
Outbreak Investigation: Apply steps in conducting an outbreak investigation		
Sub-Competencies		
Monitor for potential outbreaks		
Determine the cause of an outbreak		
Establish a case definition		
Collecting and testing samples		
Determine need for outbreak/emergency notification		
Competency		
Responding to outbreaks or emergency events: Use systematic approach for		
outbreak response		
Sub-Competencies Sub-Competencies		
Conduct situational briefings		
Manage surge capacity		
Engage outbreak emergency communication		
Competency		
Establish outbreak recovery measures: Use systematic approach to recover from		
outbreak and return to SOP		
Sub-Competencies Sub-Competencies		
Return to normal operating procedures		
Obtain and incorporate stakeholder feedback		

## **Possible Interventions to Support Low Performance**

If an employee is identified as a low performer in specific skills in the observation checklist, the supervisor can support their improvement through some of the following strategies: 30

<sup>30</sup> https://www.businessnewsdaily.com/8997-performance-improvement-plan.html

- Provide continuing professional development or education from the One Health curriculum
- Develop an action plan in collaboration with the employee
- Partner with employee on a project with an employee who is a moderate or high performer in the competencies requiring intervention
- Monitor employee performance in those skills and provided consistent feedback
- Reassign the employee to task or duties where they exhibit greater performance

#### **Possible Interventions to Support Low Potential**

If an employee is identified as having low potential in specific skills in the observation checklist, the supervisor can support their improvement through some of the following strategies: 31

- Consistently acknowledge growth and achievement of targeted goals
- Provide personalized incentives that recognize growth and willingness to learn
- Provide accurate and target feedback that continues to support growth and behavior change

#### **Possible Interventions to Improve Moderate Performance**

If an employee is identified as a moderate performer in specific skills in the observation checklist, the supervisor can support their improvement through some of the following strategies:

- Provide continuing professional development or education from the One Health curriculum
- Provide opportunities for the employee to lead specific tasks within a larger project
- Allow employee to develop own goals for responsibilities and performance improvement
- Consistently monitor performance and provide specific, actionable feedback

## **Possible Interventions to Improve Moderate Potential**

If an employee is identified as having moderate potential in specific skills in the observation checklist, the supervisor can support their improvement through some of the following strategies: 32

- Allow employee to share their success and lessons learned with others to encourage skill sharing and leadership
- Provide employee with a mentor whose competencies are higher in areas where the employee's areas of growth

## **Possible Supports to Grow High Performance**

If an employee is identified as a high performer in specific skills in the observation checklist, the supervisor can support their improvement through some of the following strategies:<sup>33</sup>

<sup>31</sup> https://www.mindtools.com/pages/article/newTMM\_80.htm

<sup>32</sup> Waterhouse, Jennifer. (2008). Motivation in Public Management: The Call of Public Service edited by James L. Perry and Annie Hondeghem. Australian Journal of Public Administration. 67. 10.1111/j.1467-8500.2008.00605\_7.x.

<sup>33</sup> Motivating Employees by Sharlyn J. Lauby American Society for Training and Development, 2005

- Provide continuing professional development or education from the One Health curriculum
- Provide opportunities for the employee to lead projects
- Promote employee to positions which allow them to utilize and grow their high performing competencies

#### **Possible Supports to Grow High Potential**

If an employee is identified as having high potential in specific skills in the observation checklist, the supervisor can support their improvement through some of the following strategies: 34

- Include the employee in leadership or management meetings
- Allow employee to mentor moderate or low potential employees
- Provide employee with a mentor who effectively fosters potential

# **Outbreak Investigation and Response and One Health Level Four Results Assessment**

The following tools can be used to assess an organization's investigation and response to a One Health related outbreak.

Score the organization t	o response to a One Health outbreak and complete an investigation on that outbreak
9. Basic	The organization can utilize real-time data, and scientific and clinical understanding of a disease to develop a case definition and can identify the cause of an outbreak. They have the laboratory capabilities to analyze samples and can monitor for indicators and triggers of a One Health disease outbreak.
10. Mid-level	The organization has a strategic operating plan for the allocation of human and financial resource to scale up the surveillance and monitoring of an outbreak, including collecting and testing samples, developing a case definition, and identifying a cause. They can support the management of surge capacity in the community and support key partners in the treatment and response to an outbreak.
11. High-level	The organization has a strategic operating plan that can be rapidly implemented to support surveillance, engaging key partners, and communication with communities. The organization can rapidly deploy resources to support an investigation and implement target interventions to minimize spread of the disease. The organization has relationships with key partners to support the implementation of these interventions. The organization has a clearly defined policy of outbreak communication and varied strategies to communication based on stakeholder. The organization is open to receiving stakeholder feedback and has identified policies for incorporating feedback into procedure.
12. Advanced	The organization is an identified leader in One Health disease outbreaks. The organization has a system that allows for rapid case detection and identification of the cause of the disease outbreak. They support strong surveillance systems that can monitor for clusters of outbreaks and support efficient laboratory work to identify cases. The organization develops and fosters effective and efficient relationships with

other key partners to rapidly deliver response services and has a clear organizational plan for the deployment of services by themselves and key partners. The organization is a trusted member of the community and has strategic plans for clear, consistent communication based on the analysis of data and clinical understanding of disease. The organization can communicate in a culturally appropriate way that is reflective of the community they serve and incorporates the needs of the community into its response and investigation. The organization has a clear and effective policy to obtain and incorporate stakeholder feedback and implementation policies for returning to standard operating procedure.

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- A framework for global outbreak alert and response https://www.who.int/csr/resources/publications/surveillance/whocdscsr2002.pdf?ua=1
- Coronavirus disease (COVID-19) training: Simulation exercise, WHO https://www.who.int/emergencies/diseases/novel-coronavirus-2019/training/simulation-exercise
- Creating an Action Plan to Prepare for an Outbreak, National Geographic https://www.nationalgeographic.org/activity/creating-action-plan-prepare-outbreak/
- Designing an Interactive Field Epidemiology Case Study Training for Public Health Practitioners Amy L. Nelson, Lauren Bradley, and Pia D. M. MacDonald https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6170882/
- Public Health Emergency Response Guide for State, Local, and Tribal Public Health Directors https://emergency.cdc.gov/planning/pdf/cdcresponseguide.pdf
- Outbreak Case Definitions, CDC <a href="https://www.cdc.gov/urdo/downloads/casedefinitions.pdf">https://www.cdc.gov/urdo/downloads/casedefinitions.pdf</a>
- Outbreak Toolkit, National Collaborating Centre for Infectious Diseases https://outbreaktools.ca/
- Regional Acute Infectious Disease Response Plan https://nwhrn.org/wpcontent/uploads/2017/08/Regional-Acute-Infectious-Disease-Response-Plan 08 2017 FINAL.pdf
- Shotgun Hypothesis-generating Questionnaires, Oregon Health Authority https://www.oregon.gov/oha/ph/DiseasesConditions/CommunicableDisease/Outbreaks/Gastroenteriti s/Pages/Outbreak-Investigation-Tools.aspx#shotgun
- WHO checklist for influenza pandemic preparedness planning https://www.who.int/csr/resources/publications/influenza/FluCheck6web.pdf
- World Health Organization Outbreak Communication Planning Guide https://www.who.int/ihr/elibrary/WHOOutbreakCommsPlanngGuide.pdf?ua=1