Creating Effective Interview Questions (Tier 1: Foundational)

Purpose:

Create competency-based interview process for an Epidemiologist I (Foundational Tier) position in your epidemiology department utilizing the Applied Epidemiology Competencies (AECs).

How Do I Create a Competency-based Interview Process?

A competency-based interview process uses clear selection criteria, effective interview questions, and structured interviews to evaluate an individual's knowledge, skills, and values beyond what qualifications and work experience are listed on paper. You should use a competency-based job description as a starting point for the creation of questions that assess the candidate's competencies in the essential and non-essential functions of the job they are interviewing for, whenever possible. It is important to design the interview process to be inclusive and equitable to attract diverse candidates and consistently and fairly assess these individuals.

Review the following steps to create a competency-based interview process using the AECs for an epidemiologist position in your department.

Step 1:

Develop clear selection criteria

Develop clear selection criteria based on the competencies and skills outlined in the job description. Evaluate which competencies are essential and which are nice to have. Interviewers should understand that certain candidates may not demonstrate all of the job's essential skills but if they are willing to learn and the organization can commit to providing training and support, they may still be a good candidate.

Remember: The AECs can be used to describe essential job functions and competencies expected based on the role and the level of skill needed ranging from entry-level epidemiologists to senior-level positions.

Step 2:

Create effective, competency-based interview questions

After defining the selection criteria, create effective, competency-based interview questions that allow interviewees to assess the candidate's strengths and weaknesses in the key skills needed for the position. These questions should be aligned with what success looks like for the role and what you expect the answers to demonstrate.

Interview questions should focus on direct experience with the competencies and capability to apply knowledge, experience, and flexibility. Ensure questions do not always focus on a time when something did not go well to balance positive- and negative-geared questions.

Consider utilizing case-based interviews or skills assessments as appropriate for the position to evaluate a candidate's problem-solving performance consistently and objectively. Using skills assessments allows applicants to apply what they know and demonstrate their expertise, which can reduce bias for those who may not have had internships or jobs that were directly relevant to speak about. This provides an opportunity for interviewees to share not just what they have done but also what they are capable of doing.
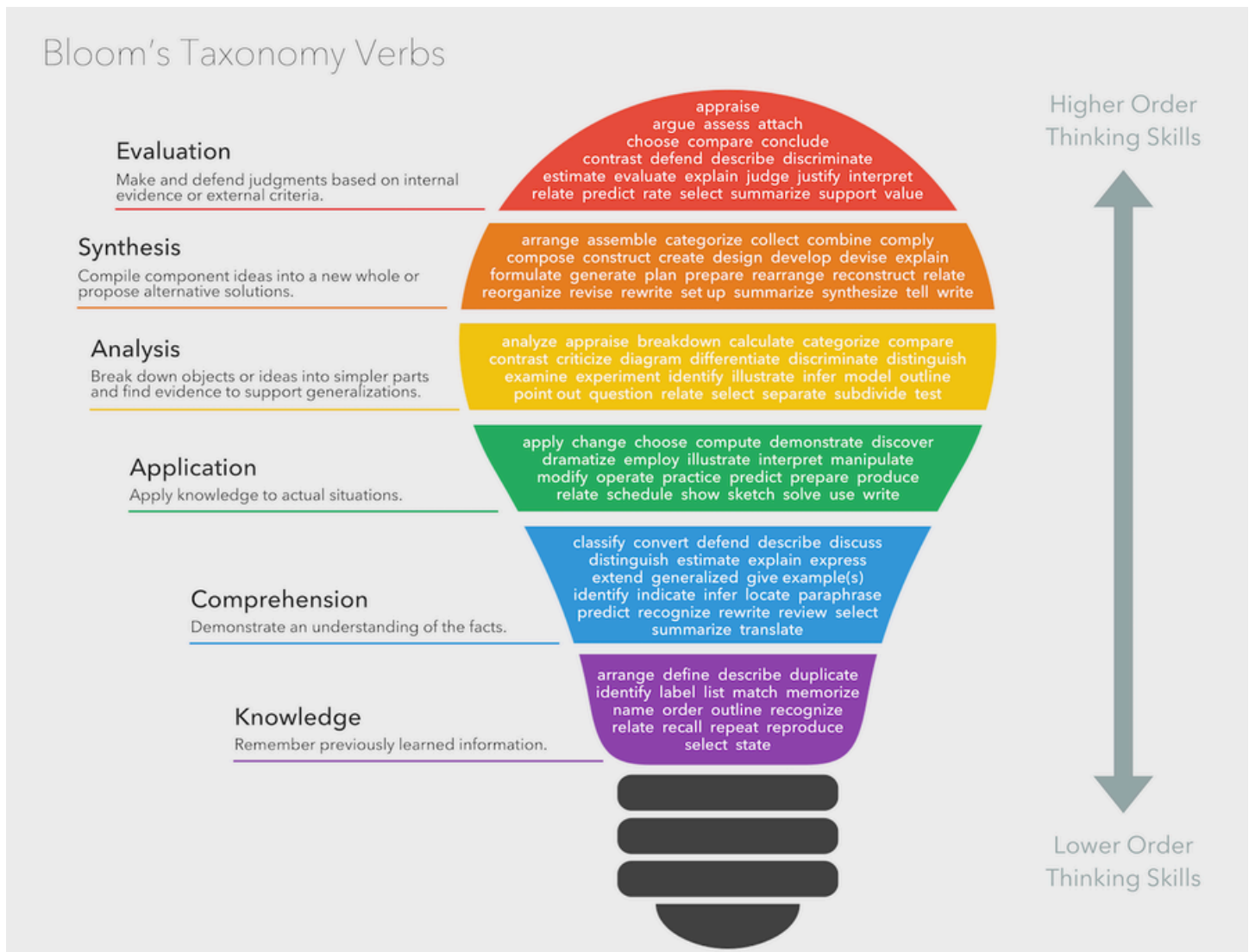
Using the AEC's Skill Progression by Tier:

Individuals creating job descriptions and competency-based interview questions can utilize the AECs to select measurable skills that increase in complexity and specificity as the individual progresses through the tiers.

Bloom's Taxonomy was used to describe the progression of skills from knowledge to application, and finally to evaluation. For example, the verb for AECs subcompetency 1.4.1. progresses from identifies, to explains, to assesses, and finally advocates for.

Competency 1.4. Conducts surveillance activities (e.g., reviews surveillance data needs, assesses existing surveillance data and systems, collects, analyzes, evaluates, and communicates surveillance data)			
Tier 1: Foundational Subcompetencies	**Tier 2: Intermediate Subcompetencies**	**Tier 3: Practiced Subcompetencies**	**Tier 4: Advanced Subcompetencies**
T1: 1.4.1. Identifies surveillance data needs for factors affecting the health of a community	**T2: 1.4.1. Explains** surveillance data needs (e.g., case definitions, data sources, quality, limitations, data collection elements, data transfer, data collection timeliness, frequency of reporting, uses of data, functional requirements of information systems to support)	**T3: 1.4.1. Assesses** surveillance data needs (e.g., data quality, availability, relevance, suitability, simplicity, sensitivity, predictability, timeliness, representativeness, flexibility)	**T4: 1.4.1. Advocates for** surveillance data strategies (e.g., case definitions, data sources, quality, limitations, data collection elements, data transfer, data collection timeliness, frequency of reporting, uses of data, functional requirements of information systems to support)

Interviewers should familiarize themselves with the action verbs and progression of the order of thinking skills associated with Bloom's taxonomy to better understand and evaluate the interviewee's responses describing their experience and capabilities.

Bloom's Taxonomy Verbs

Evaluation
Make and defend judgments based on internal evidence or external criteria.

appraise argue assess attach choose compare conclude contrast defend describe discriminate estimate evaluate explain judge justify interpret relate predict rate select summarize support value

Synthesis
Compile component ideas into a new whole or propose alternative solutions.

arrange assemble categorize collect combine comply compose construct create design develop devise explain formulate generate plan prepare rearrange reconstruct relate reorganize revise rewrite set up summarize synthesize tell write

Analysis
Break down objects or ideas into simpler parts and find evidence to support generalizations.

analyze appraise breakdown calculate categorize compare contrast criticize diagram differentiate discriminate distinguish examine experiment identify illustrate infer model outline point out question relate select separate subdivide test

Application
Apply knowledge to actual situations.

apply change choose compute demonstrate discover dramatize employ illustrate interpret manipulate modify operate practice predict prepare produce relate schedule show sketch solve use write

Comprehension
Demonstrate an understanding of the facts.

classify convert defend describe discuss distinguish estimate explain express extend generalized give example(s) identify indicate infer locate paraphrase predict recognize rewrite review select summarize translate

Knowledge
Remember previously learned information.

arrange define describe duplicate identify label list match memorize name order outline recognize relate recall repeat reproduce select state

Higher Order Thinking Skills

Lower Order Thinking Skills

Bloom's Taxonomy Verbs by Fractus Learning is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Using the STAR Technique to Create Competency-based Interview Questions:

A common technique to create and answer competency-based interview questions is referred to as "STAR". The STAR technique can be used to incorporate Bloom's taxonomy in asking interview questions as well as listening for appropriate action verbs in a candidate's response.

The STAR method can be applied in the context of asking a potential candidate about their involvement in an epidemiologic study:

Situation- this part asks for the context of a situation or challenge.
- Consider asking: "Tell me about a time when you were involved in an epidemiologic study."
- You may expect to hear briefly about what the study was and why it was being performed here.

Task- this part addresses what the candidate's responsibility or role was in the situation.
- Consider asking: "What was your role in the epidemiologic study?"
- You should expect to hear briefly about their role, whether it was assigned to them or if they selected it, and why they had those responsibilities.

Action- this part details what actions the individual took during the situation, what they did to achieve success, and contains a lot of information about the applicant's level of competency.
- Consider asking: "What tasks did you perform and what skills did you use during this epidemiologic study?"
- You may hear about study design, data collection, data cleaning/analysis, data interpretation, data presentation, and development of a public health action depending on the experience and skills of the candidate.
- This part of the candidate's answer should help you assess whether they have the correct level of competency based on Bloom's taxonomy and the AECs to successfully perform the role.
  - For a Foundational Epidemiologist, you may listen for verbs such as describe, identify, collect, assist, and participate.

Result- this part describes what results were the outcome of the action performed by the candidate.
- Consider asking: "What was the major outcome or achievement of the epidemiologic study?"
- You should expect to hear about the interventions that resulted from the study, what the candidate learned, and what they gained from the experience.

Step 3:

Conduct structured interviews

Conduct structured interviews that ask questions to all candidates in the same order to provide them all with the same opportunity to describe their skills and experience. Allow for additional time for candidates to discuss unique expertise or items from their resume/CV.

Where possible, have multiple individuals interview the candidate either individually or as a panel to evaluate the interviewee from different perspectives. Be mindful about the time of scheduled interviews and number of interviews that will be conducted with each candidate. Often interviewees will need to take time off at their current job to interview for new positions and scheduling multiple interviews on multiple days can be difficult and further inequities. Inform interviewers about the expected scoring system and how to efficiently listen to and evaluate responses to ensure consistent and fair grading of candidates. Instruct them to take notes during the interview on what was said to avoid recall bias and to be objective on any physical observations of interviewees (e.g., "they did not make much eye contact" as opposed to the interpretation of "they were nervous and uncomfortable"). Consider training interviewers about unconscious bias and ways to combat it before they conduct their interviews. Individuals often prefer candidates who look like, think like, and talk like them and tend to assess them as having better likeability or organization cultural "fit". Educate interviewers about the importance of diversity, equity, and inclusion and the importance of considering soft skills and likeability but as only a part of the candidate's overall skills and capabilities.

Consult with your Human Resources group to ensure compliance with organizational requirements and any standardized processes for interviews and documentation.

Example Interview Questions for an Epidemiologist I (Foundational Tier):

1. Tell me what inspired you to become an epidemiologist.

2. What strategies do you use to stay organized and schedule your time effectively when working on simultaneous projects?

3. Tell me about your experience in working with public health data including which data management and analysis tool(s) you are most comfortable using (e.g., SAS, R, Epi Info, etc.), and share an example of an analysis you completed using [that/those] software tools. If you have not worked directly with public health data, describe how you would use one of the data management and analysis tools you are comfortable using.
    - **Optional follow up questions/prompts:**
        - What data source(s) did you use?
        - What kind(s) of statistical analyses did you perform?
        - Were you responsible for managing and cleaning the data?
        - What is the largest data set you have worked with?
        - What has been your experience with primary data collection?

4. Describe your experience with communicating public health information to scientific audiences and/or the general public. Please include descriptions of any relevant work, such as written summaries of analysis findings, published papers, presentations, or informational materials for the public. You can describe experience from your graduate school program if you do not have field experience. How do you ensure that your communication strategies are appropriate for diverse audiences?

5. Please share an experience where you've taken part in an epidemiologic study. This could be an outbreak investigation, an assessment of a community health issue, or another type of epidemiologic study. What was your role in the epidemiologic study and what did you work on? How can you apply the principles of health equity to study design and data analysis? If you do not have field experience yet, consider your experiences in graduate school practicum or capstone project.

6. Imagine you are working on an outbreak investigation in which the number of cases is quickly growing. You've been asked to contribute to a media briefing by generating a summary of number of cases and demographics, but you also have 7 new cases to interview, need to touch base with the Public Health Lab about the results for 3 of these cases, and you also need to finish writing your assigned portion of the CDC grant before the impending deadline. How do you prioritize these multiple, urgent needs?

7. For this last scenario, imagine you've been working on conducting an assessment for the past month and are beginning to write your report of the findings. However, your department has some staffing changes, and they must temporarily reassign you to another higher priority project. This is not only an unexpected shift in priorities, but the new project focuses on a subject area with which you have no familiarity. What steps would you take to rapidly get up to speed and get this project started off on the right track?

8. Is there any additional information relating to your resume/CV or past experience that you would like to share with me? If yes, please share it.

9. What questions do you have for me?

References:

- Carnahan, B. 6 Best Practices for Creating an Inclusive and Equitable Interview Process. (May 25 2023). Harvard Business School. Available at: https://www.hbs.edu/recruiting/insights-and-advice/blog/post/6-best-practices-to-creating-inclusive-and-equitable-interview-processes.
- Indeed Editorial Team. 13 Competency-based Interview Questions and How to Prepare for the Interview. (July 21 2023). Indeed. Available at: https://www.indeed.com/career-advice/interviewing/competency-based-interview.
- Birt, J. How to Use the STAR Interview Response Technique. (November 30 2023). Indeed. Available at: https://www.indeed.com/career-advice/interviewing/how-to-use-the-star-interview-response-technique.
- Mind Tools Content Team. How to Run Competency Based Interviews: Measuring Skills for Specific Roles. (n.d.). Mind Tools. Available at: https://www.mindtools.com/ao3gjnv/how-to-run-competency-based-interviews.
- Grantham, N. Bloom's Taxonomy Verbs. (September 13 2023). Fractus Learning. Available at: https://www.fractuslearning.com/blooms-taxonomy-verbs-free-chart/.

Authors:

Julianne L. Baron, PhD, CPH, RBP, Science and Safety Consulting, Paid Consultant
Sarah Auer, MPH, CHES, Council of State and Territorial Epidemiologists, Program Analyst II
Nicola Marsden-Haug, MPH, Council of State and Territorial Epidemiologists, Training Specialist
Jessica Arrazola, DrPH, MPH, MCHES, Council of State and Territorial Epidemiologists, Director of Educational Strategy