

Epidemiology

New for 2018-2019

At ILC, all formatting for the test will be multiple choice, except for the tie-breaker question, which will require a written response. The number of total questions on the test is now 75. Per [GRR rule #50](#), the regional/state level may follow the old test format.

At ILC, [photo ID](#) must be presented prior to competing.

Purpose To encourage HOSA members to study the effects of health and disease in populations, to improve their scientific literacy, and to provide insights into public health careers.

Description This event shall be a written examination of concepts related to the study of epidemiology. Individual competitors shall be expected to recognize, identify, define, interpret and apply these concepts in a 75 item multiple choice test, from select websites.

Dress Code Competitors must be in official HOSA uniform or in proper business attire. Bonus points will be awarded for [proper dress](#).

Rules and Procedures

1. Competitors in this event must be active members of HOSA and in good standing in the category division in which they are registered to compete (Secondary or Postsecondary/Collegiate).
2. Competitors must be familiar with and adhere to the [“General Rules and Regulations of the HOSA Competitive Events Program \(GRR\).”](#)
3. The test will consist of (75) multiple-choice items.
4. The official references for the development of all test items will be entirely web-based as posted as of September 1, 2018. The test plan separated by percentages is also listed below.

- **CDC Websites – 10%**

- <http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/index.html>

- <http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson6/section2.html>

- An Introduction to Epidemiology

- Steps of an Outbreak Investigation

- **CDC website – 10%**

- Agency for Toxic Substances and Disease Registry: Environmental Health***

- <https://www.atsdr.cdc.gov/sites/brownfields/pdfs/epidemiology-508.pdf>

- **Basic Epidemiology – World Health Organization – 10%**

- http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf

- What is Epidemiology?*

- Measuring Health and Disease

- Types of Studies

- **Emerging and Re-emerging Infectious Diseases – 10%**
https://science.education.nih.gov/supplements/nih_diseases.pdf
 Understanding Emerging and Re-emerging Infectious Diseases
- **Public Health Careers – 5%**
<http://www.publichealth.org/careers/>
- **CDC: Disaster Epidemiology and Assessment – 10%**
<http://www.cdc.gov/nceh/hsb/disaster/epidemiology.htm>
 - CDC Activities
 - Mission, goals and objectives
 - Application and service in disaster settings: surveillance and rapid needs assessment
 - Applied research to prevent injuries, illnesses and deaths
 - Consultation and training
 - Field investigations
- **Office of Assistant Secretary for Preparedness & Response – 10%**
<http://www.phe.gov/preparedness/Pages/default.aspx>
 - Under the preparation tab
 - Responders, Clinicians & Practitioners
 - International Preparedness & Response
 - Public Health Emergency Response
- **CDC: Morbidity and Mortality Weekly Report – 35%**
<https://www.cdc.gov/mmwr/index.html>
 - Case studies, investigations, surveillance summaries and scientific information and recommendations

5. Written case studies, investigations, surveillance summaries, and scientific information and recommendation will be a part of the test and will include background information about selected public health situations and a series of multiple choice questions related to the data will be included.
6. All competitors shall report to the site of the event at the time designated for the event orientation. The test will immediately follow the orientation. At ILC, [photo ID](#) must be presented prior to competing in each round. **No proxies will be allowed for the orientation.** Calculators may NOT be used.
7. [Test Instructions](#): The competitors will be given instructions and will be notified to start the test. There will be a maximum of two (2) hours. A notice will be given when fifteen (15) minutes are remaining. Competitors should leave the testing site promptly after completion of the test.

NOTE: *States/regions may use a different process for testing, to include but not limited to pre-conference testing, online testing, and testing at a computer. Check with your Area/Region/State for the process you will be using.*

8. A written tiebreaker will be administered with the original test. In case of a tie, this written response will be judged and used to break the tie.

Competitor Must Provide:

- Event guidelines (orientation)
- #2 lead pencils with eraser
- Watch with second hand (optional)
- [Photo ID](#)

FOR SPECIFICS ON EVENT MANAGEMENT SEE [MANAGING COMPETITIVE EVENTS](#)

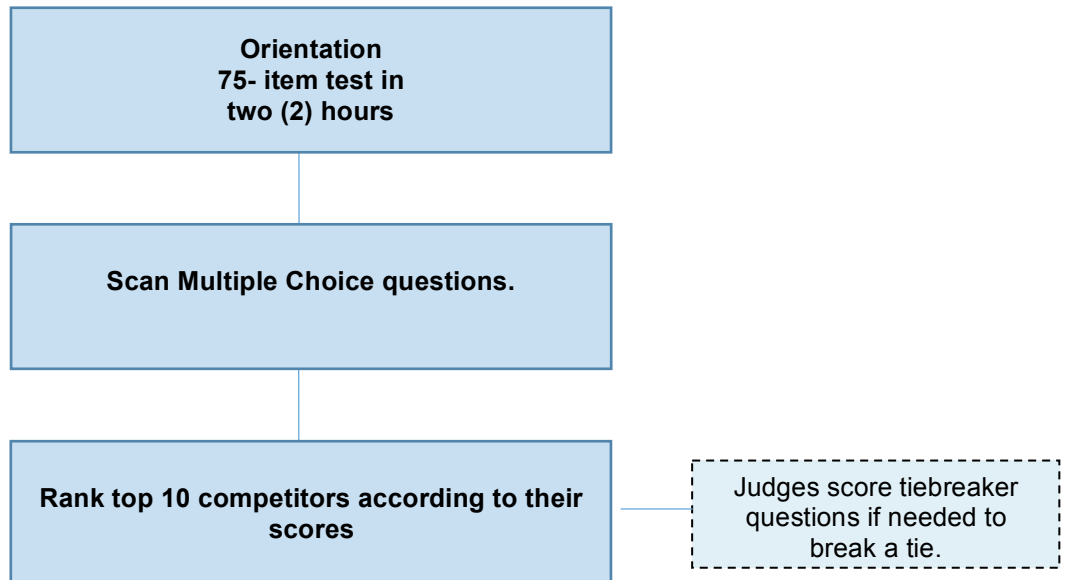
Required Personnel:

- One Event Manager
- One QA to provide quality assurance for the event by ensuring that the guidelines are followed and all event documents are complete.
- Proctors for Testing – Approximately one proctor for 20 competitors
- One judge who is considered by the HOSA Competitive Events committee to be an expert in the area being tested - to grade the essay questions in case of a tie
- One Section Leader (per section)
- Event Assistants per section as needed

Facilities, Equipment and Materials:

- One room to accommodate the total number of competitors
- Tables/chairs or schoolroom desks/chairs for total number of competitors
- Table/chairs for event personnel to provide for registration, and distribution of materials
- List of competitors for check-in
- One pre-numbered test per competitor
- Scantron/answer forms- one copy per competitor
- Clock or timer
- Evaluation Forms – competitor, judge, and personnel
- #2 lead pencils with eraser to complete evaluations (event personnel)

Event Flow Chart



Sample Multiple Choice Test Questions

1. The portion of the incidence of a disease in the exposed that is due to the exposure is:
 - A. attributable risk.
 - B. cohort study.
 - C. risk benefit.
 - D. benefit group.

2. If a study is designed to determine the number of pregnancies during the junior year of high school and *only* includes minority populations, the study is said to be:
 - A. biased.
 - B. confounded.
 - C. limited.
 - D. nonessential.

3. The re-emergence of some infectious diseases, such as the diphtheria outbreak in Russia in the 1990s, is caused by:
 - A. improper sanitation.
 - B. lapses in vaccination programs.
 - C. malnutrition which compromises the immune system.
 - D. radiation from nuclear accidents