

Potential Career Pathways in Epidemiology and Biostatistics

Epidemiologists and Biostatisticians use epidemiologic and statistical methods to understand and improve population health, promote social justice, and facilitate evidence-based public health policy. This is by no means a comprehensive list of potential options, but an overview of common pathways to give you a starting point for exploration. Some potential job titles someone in the Epidemiology & Biostatistics field might put these skills to use in include:

- 1. Public Health Epidemiologists** investigate how and where disease outbreaks start, how diseases are transmitted within a population, and how to effectively treat these diseases. This information is then used to develop or improve clinical and medical research, and preventative healthcare. As an epidemiologist, you may work in an office and/or laboratory setting, at a national, state, or local health department, in a hospital, or at a college or university.
- 2. Infection Control Epidemiologists**, sometimes called **Hospital Epidemiologists** create and implement policies that control the spread of a disease within health care settings. Some specific job duties might include educating and enforcing hygiene practices among health care workers, monitoring and reporting infection data gathered in the health care facility, and improving overall health and safety for patients and employees in the health care setting.
- 3. Pharmaceutical Epidemiologists** work for pharmaceutical companies and government agencies to study how a drug affects a population over time by reviewing symptoms of study participants. They also generate reports of findings for public health or other regulatory agencies, or insurance or health care providers to use. Pharmaceutical Epidemiologists often work in laboratories.
- 4. Field Epidemiologists** work on the ground in communities facing severe, acute public health crises to provide time-sensitive responses. They rely on descriptive studies to formulate a hypothesis before carrying out more quantitatively focused research. Field Epidemiologists may work for the CDC or global organizations like the WHO.
- 5. Data Analyst/Data Scientists** design experimental frameworks to collect and analyze data. They may search through existing data sets to collect information, or collect their own data in the field. Data scientists use their findings to create reports and

presentations that outlines how businesses, organizations, or governments can apply this data to create actionable change.

6. **Biostatisticians** provide statistical expertise to guide and support researchers within health science fields. They design, develop and perform public health research studies and clinical trials by collecting, analyzing, interpreting, and presenting data. Biostatisticians may work for universities, pharmaceutical companies, governments, NGO's, or hospitals.
7. **Healthcare and Biotech Consultants** use knowledge of therapies, equipment, and technologies in the biotech field to advise biotech companies on how they can improve their efficiency and/or develop new products and services for their consumers. Some daily responsibilities might include observing production cycles, reviewing financial data, inspecting equipment, and advising on what areas of the company could be improved. As a biotech consultant, you may work for a consulting firm or as an independent contractor.
8. **Research, Monitoring, and Evaluation Specialist/Managers** develop and improve research and program evaluation tools. They manage survey development, data analysis, and reporting; conduct focus groups, interviews, and surveys; and analyze quantitative and qualitative data.
9. **Study Coordinators** work with research investigators to manage daily activities of research projects. They coordinate research and ensure that it is in line with institution policy and research ethics, and ensure proper training of research personnel. Study coordinators might work for a college or university, consulting firm, hospital, or government agency.
10. **Data Control Assistants** schedule and track data for processing, ensure compliance with data processing standards, operate and maintain data processing equipment, and maintain data libraries. Other job duties might include performing some clerical functions and maintaining inventory of supplies.

A few places of employment where you might search for Epidemiology and Biostatistician roles are large governmental agencies like the National Cancer Institute, or state or local health

agencies. You can also find positions in health care facilities such as a hospital, doctor's office, or community health clinic; or in health care coverage agencies like Aetna. NGOs and nonprofits like the United Nations Children's Fund also offer positions in these fields, as well as research institutes like Bristol Myers Squibb (BMS), and Biotech companies like Medidata. Educational institutions like community centers, and colleges and universities also offer opportunities for employment in this field. Additionally, healthcare consulting firms Huron Consulting Group offer a wealth of opportunities.

These are just some examples of what titles a professional in the Epidemiology and Biostats fields of public health might hold and who they might be employed by. For more information on the day-to-day job functions of these career options, you can do some further exploration using [ONetOnline](#). ONetOnline is a great resource for students who are beginning or transitioning careers to explore career options in detail. A helpful tip to navigate ONet might be to use the "find occupations" tool first to get a better idea of some more job titles. Next, after you have found some titles that are of your interest, you can use the "advanced search" option to see how your skills match with these options and what skills you might still need to build to pursue roles of interest.

For more detail on how to navigate ONetOnline and for information on other career exploration tools, see the Career Conversations Corner piece from the Office of Career Services newsletter published on June 16, 2021.

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