

Maternal and Child Health

The New York City Department of Health and Mental Hygiene (DOHMH) is a well staffed city health department with over 6,000 employees serving over 8 million New Yorkers. The city is known for its ethnic and socioeconomic diversity and its large number of visitors and immigrants. Nationally, the department is frequently on the forefront of responding to emerging health threats, innovations in public health surveillance, and programmatic intervention. The fellow will be assigned to the Bureau of Vital Statistics, one of four Bureaus located within the Division of Epidemiology. The Bureau has over 175 employees, including masters and doctorate level epidemiologists. All deaths and births are reported to our bureau, along with important associated health data on conditions associated with births and deaths. NYC has over 120,000 births a year and more than 50,000 deaths. We have recently implemented a new electronic birth registration system and are in the process of implementing an electronic death registration system. We work closely with the medical examiner who investigates deaths of unknown cause and are involved in the response to nearly every major outbreak through death tracking and certification, including the recent novel H1N1 outbreak. The fellow would join a committed group of public health professionals working to accurately track and describe births and deaths in New York City. A recent focus has been describing the health status of special populations through mortality data and improving the quality of birth certificate and cause of death data.

Day To Day Activities:

The fellow will spend most of their time working on their chosen long term projects. The fellow will meet weekly with his/her primary supervisors and will be fully integrated into bureau activities. Other day to day activities include: attending bureau data analysis team/research meetings, national CDC webinars relating to vital statistics, and other meetings and webinars regarding the electronic events registration system as indicated. The fellow may also attend DOHMH's many formal educational opportunities including monthly Epidemiology Grand Rounds, research seminars, seminars at the medical examiner's office, and trainings. Opportunities will likely also arise to participate in collaborations with researchers outside the Bureau and outside of DOHMH, including academic public health partners.

Potential Projects:

Surveillance or programmatic evaluation projects:

- a. Evaluate the accuracy of reported cause of death data by comparing ICD-10 cause of death to named ICD-9 hospital discharge data on persons who died while hospitalized. Compute percent agreement and kappa statistics to compare information from both the data sources
- b. Compare NYC hospital discharge and birth certificate data with respect to selected prenatal, labor and delivery and infant health data items. Compute percent agreement and kappa statistics on selected data items to compare information from both the data sources

- c. Evaluated the recently implemented electronic birth registration system using the CDC's updated guidelines on the evaluation of surveillance systems
- d. Evaluate NYC's recently erected influenza-related death surveillance system using CDC surveillance evaluation guidelines
- e. Describe and evaluate birth certificate preparation and certification processes. Develop and implement a survey of NYC birthing facility staff, including quantitative and qualitative questionnaires with interview protocols, to ascertain the methods used to collect birth certificate information.

Data analysis projects:

- a. Calculate life expectancy for NYC for last 100 years and examine trends by race/ethnicity and other demographic groups.
- b. Conduct an in-depth analysis of exposure deaths (hypothermia and hyperthermia) in NYC during the past 10 years, with an emphasis on deaths that occur outdoors to inform city policies on homelessness, occupational fatalities and isolated older adults.
- c. Conduct a survey with both qualitative and quantitative elements of NYC birthing facilities to ascertain the methods used to collect birth certificate information. Interview hospital personnel to NYC birthing facilities to gather data on their respective birth certificate preparation and certification processes.
- d. Develop data quality indicators that can be used to track data quality overtime and focus intervention on certain hospitals and clinicians.
- e. Other analysis projects involving birth and death certificate data that reflect the fellow's specific interests this would be accommodated (e.g. analyzing birth data or cause of death data for a specific condition or subpopulation).

Outbreak/field investigation projects

- a. Investigate identified clusters of unexplained deaths
- b. Investigate a foodborne outbreak with DOHMH's bureau of communicable disease

Emergency Preparedness Role:

The fellow will be integrated into DOHMH's emergency response structure, which is based on the Incident Management System (IMS). Like all DOHMH staff, he or she will be assigned to a specific response group, likely the epidata unit, and will participate in planning or emergency response activities.

Assignment Location: New York, NY

Primary Mentor:

Elizabeth Begier, MD, MPH

Assistant Commissioner, Bureau of Vital Statistics

Secondary Mentor:

Regina Zimmerman, PhD, MPH

Director, Office of Vital Statistics