Injury

Assignment Description

On average, one out of every three New Yorkers go to the emergency department (ED) every year, with over 6.5 million ED admissions per year. Injury and poisoning account for almost 25% of these admissions. Emergency departments can also be chaotic, overcrowded, and stressful entry points into the health care system. Some EDs in New York average over 300 patients per day, and a quarter of the EDs average 10 patients per hour. Most of these large EDs are regional trauma centers, designated to receive the most seriously injured patients. This is coupled with the problem of ED overcrowding, a problem that stems both from the overuse of the ED for urgent or primary care and from facility wide operation problems that delay the transition to inpatient admissions form the ED. Two of the major goals of this fellowship will be to 1) work with the trauma program of the Bureau of Emergency Medical Services on projects related to the New York State Trauma Registry and 2) work with the Patient Safety Center and the Division of Health Care Standards and Surveillance to assess patient safety and quality in emergency departments in New York. Both these goals will be accomplished in partnership with the other DOH partners and external stakeholders involved in injury and emergency medical care.

Day-to- Day Activities

The first month or two of the fellowship placement will be oriented towards setting priorities and determining the goals for the two years. The fellow will meet with senior management, including the OHSM Medical Director, Division Directors, program staff, and other stakeholders to determine the main goals and objectives of each project. The fellow will develop an analytic plan and a scope of work for each project he or she selects to accomplish, and present these back to the management. Once the priorities are set, the fellow will work closely with the mentors to create a detailed work plan and continue to consult with the various stakeholders as need arises and to provide updates as the project progress. As with any epidemiologist employed within the Department, day-to-day activities will consist of a mix of planning, executing, and communicating findings related to surveillance and research.

Potential Projects

Evaluation of the New York Patient Occurrence and Tracking System (NYPORTS) using the Public Health Surveillance System Evaluation Model: The NYPORTS system is the Health Department's primary mechanism for monitoring patient safety in regulated facilities. Although patient safety is a long standing concern in the medical care field, it is a relatively new field of epidemiology, having been brought to the forefront just 10 years ago with the Institute of Medicine's groundbreaking report "To error is human". NYPORTS is currently an amalgam of the medical and public health models. Root Cause Analysis is the current paradigm for looking at causality in the safety field, but the "science" of using Root Cause Analysis for epidemiologic studies or surveillance of patient safety is just being developed. With this in mind, NYPORTS would benefit from evaluation from the point of view of public health and epidemiologic surveillance. By apply the principles of public health surveillance, the Applied Epidemiology Fellow would be able to make recommendations for redefine the case definitions and response priorities in order to better use both department and health care facility resources to identify emergency trends in patient safety, identify ongoing risky conditions to be addressed, and promote a statewide Culture of Safety.

Evaluation of Patient Safety in Overcrowded Emergency Departments: Overcrowded emergency departments (ED) are believed to be a risk factor for patient safety adverse events and poorer quality patient outcomes. The Applied Epidemiology Fellow will work on a multi-tiered statewide evaluation of the problem of overcrowded EDs. The Fellow will draw upon multiple data sources available to the New York State Department of Health's Patient Safety Center, including mandated adverse event reporting and Root Cause Analysis, statewide hospital inpatient and emergency room discharge data (SPARCS) and mortality data, HERDS periodic ED census surveys, and an on-site survey of ED systems. The questions to be addressed include: 1) are ED characteristics associated with patient safety events while in the ED and during the subsequent hospital stay, 2) are there patterns in root causes of serious safety events in EDs, and 3) what are the best practices for relief of ED overcrowding and for risk reduction within EDs with high volume. The project will conclude with dissemination of best practices and risk reduction strategies to EDs throughout the state. Dr Wendy Weller, from the SUNY Albany School of Public Health, has been working with the Patient Safety Center and the Division of Health Care Standards and Surveillance on this project and will be also available to the Fellow for consultation and mentoring.

Modernize the New York State Trauma Registry: The Trauma Program is in the planning stages of a multi-year initiative to modernize the New York State Trauma Registry. The Applied Epidemiology Fellow will have an opportunity to join this project in the early phases and take a lead role in the planning and implementation of the project. The Trauma Registry has been in existence over 18 years. The modernization initiative is to develop the operational and analytic capacity within the Bureau of Emergency medical Services, transitioning the registry to a commercial internet based registry software, develop data cleaning and edit routines, and develop standard data analyses and statistical models for risk adjustment. Part of the plan is to recruit staff within the Trauma Program to manage the registry and conduct the data analysis, which provides the fellow with the opportunity to transition to a research position within the Bureau of Emergency Medical Services.

Preparedness Role

During a disease outbreak, such as H1N1, departmental planning, particularly for facility response and surveillance, requires a great deal of inter-departmental program planning and efforts; under OHSM regulations, for example, have been promulgated to enable collection of data for surveillance of disease activity and outcomes; facility stress in terms of staffing, bed capacities, equipment and supplies, and for emergency communications. Specialized plans and guidance must be created and specialized surveys developed and data analyzed to appropriately plan for facility needs during the event. Additionally, specialized training, data systems and communication plans must also be created to address the needs of response officials. The CSTE fellow would attend working group sessions with the secondary mentor, attend preparedness training webinars; observe full scale drills and exercises, and after actions sessions planned for facilities and public health. In these tasks, the role of the fellow would be as an observer, and resource for recording, researching, identifying and analyzing any potential epidemiological, policy, facility resource or operations implications, outcomes and impact related to a plan, data system, or a real or exercise event. The fellow would provide this information back to the mentor and workgroup in the form of a report, or presentation outlining their ideas and proposals of the issues identified in the research and suggestions for appropriate related plan elements, training needs and activities to address these issues. The fellow would also work with the mentor to develop any after action surveys, presentations or reports that she might be involved in or that might be needed. The fellow would also provide a written evaluation/feedback regarding any training sessions they attend.

Assignment Location:	Troy, New York State
Primary Mentor:	Colleen McLaughlin, PhD, MPH Research Scientist New York State Department of Health
Secondary Mentor:	Debra Sottolano, PhD OHSM Liaison to Public Health Emergency Preparedness New York State Department of Health