Assignment Description

The Chicago Department of Public Health (CDPH) offers a broad experience in applied epidemiology within a highly collaborative culture across public health disciplines and established experience in disease surveillance, program evaluation, and data analysis. The Fellow will be assigned to both the Mental division, which oversees clinical services for city-operated mental health clinics and the Epidemiology division, which provides data and analytic support to all CDPH divisions. The Fellow will have the opportunity to develop comprehensive skills in mental health epidemiology through participation in primary data collection, community needs assessment, health impact assessments, public health surveillance, and data analysis including the use of Geographic Information System (GIS) for spatial analysis.

Day-to-Day Activities

Day-to-day activities will be determined by the Fellow’s goals and interests but will be defined by one long-term and several short-term projects. As CDPH wants to give the Fellow experience in the full breadth of public health at the local level, the Fellow will have numerous opportunities for participation on internal and external committees according to the Fellow’s interests and agency needs.

Daily activities, particularly early in the Fellowship, will center around the Fellow’s long-term project which will orient the Fellow to Chicago’s mental health care delivery system. The Fellow will work with Arlene Hankinson MD MS, Medical Director of Mental Health (Primary Mentor) and Nik Prachand MPH, Director of Epidemiology (Secondary Mentor) on a daily basis. Within the first four months, the Fellow will receive formal training in GIS software, as spatial associations and identification of areas of high burden will be a featured element of most projects. The Fellow will also participate in regular meetings of the GIS in Public Health group – an academic/private/public sector consortium of GIS specialists convened by CDPH that meets monthly to exchange ideas and applications of GIS in promoting public health. Under supervision of the Medical Director of Mental Health and Director of Epidemiology, the Fellow will develop geographic information system tools that will facilitate assessment and visualization of hyperlocal areas of concern for mental health, substance abuse and violence.

With progressive gains in experience and exposure to emerging issues impacting mental health, substance abuse, and behavioral health the Fellow will be encouraged to identify additional projects of interest. The Fellow will be immersed into the daily activities of CDPH and will be an active member of the Mental Health and Epidemiology division teams, the CDPH Substance Abuse Partnership as well as a participant on the Mayor’s Commission for a Safer Chicago. The Fellow will also work with the Emergency Preparedness division and will collaborate with CDPH’s liaison to the Office Emergency Management (Marc Khatchadourian) in developing the department’s operations to identify and serve vulnerable mental health populations.

The Fellow’s experience at CDPH will be characterized by engagement with multiple stakeholders in mental health, substance abuse, and violence prevention. Such collaborations include other divisions within CDPH, other local area health departments, the Illinois Department of Public Health, academic institutions, and external partners in community violence prevention, mental health, and substance abuse harm-reduction agencies. On a monthly basis, the fellow will meet with community development
organizations to exchange information about community concerns, with the goal of evaluating evidence in support of community concerns. The Fellow will have multiple opportunities to present ongoing and completed work in local and national forums. The Fellow will be expected to submit the completed long-term project for peer-reviewed publication.

**Potential Projects**

**Surveillance Evaluation**  
Minority AIDS Initiative Targeted Capacity Expansion (MAI-TCE) 2014-2015 program evaluation

The Fellow will work with multiple divisions within CDPH (Mental Health, Epidemiology, Substance Abuse) to complete the final year (2014-2015) of program evaluation for SAMHSA funded MAI-TCE, delivered in Chicago area mental health and substance abuse facilities. Evaluation will include summary of individual level and group level data for people screened for co-occurring substance abuse and mental health issues. Data sources include the Center for Mental Health Service’s Transformation Accountability (TRAC) Performance Reporting System; this evaluation will be based on the evaluation plan used by the contracted evaluator for interim reporting through 2014.

**Surveillance Activity**  
Mental illness, substance abuse, violence surveillance

The Fellow will work with multiple divisions within CDPH (Mental Health, Epidemiology, Substance Abuse, Office of Violence Prevention) to quantify the city-wide prevalence burden of mental illness, substance abuse, and violence. Multiple data sources will be queried, including the Illinois Department of Public Health vital records (deaths) and hospitalization and outpatient records (hospitalizations and emergency department visits), electronic medical record data from the Chicago Area Patient Centered Outcomes Research Network (CAPRICORN), Chicago Police Department crime database, and Federal Bureau of Investigations crime data. Analysis will integrate a vast array of social determinant indicators (e.g. economic stability, housing, educational outcomes, social cohesion measures, and food insecurity) that the Office of Epidemiology is currently compiling and tracking to elucidate their relationship to the occurrence of mental health and substance use disorders.

Where address level data are available, Geographic Information System software will be used to create maps showing locations of high mortality and morbidity due to mental illness, substance abuse, and violence. GIS software will also be used for spatial associations of the built environment and other social determinants of health with mortality and morbidity from mental illness, substance abuse, and violence. The Fellow will have a unique opportunity to analyze data from the recently completed initial wave of the Healthy Chicago Survey – a population-based, random-digit dialed, behavioral survey which included several mental health measurement scales of depression and severe psychological distress. In addition, the Fellow will lead the development of new questions related to mental health and substance use for the second and subsequent waves of the survey. The Fellow will be instrumental in releasing surveillance data and maps onto the Chicago Open Data portal.
Major Project  
Chicago Mental Health System Profile - A Ten Year Update

This is the primary project of the 2-year experience. The Fellow will work with multiple divisions within CDPH (Mental Health, Epidemiology, Policy and Planning) to update a city-wide mental health system profile, first published in 2006. This 10-year update will update elements of the original report and will include several new elements, including comparison of system profile in 2006 and 2016, descriptive epidemiology of city-wide mental illness burden, quantitative and qualitative assessment of mental health service needs, and summary profiles for all 77 Chicago community areas. The Fellow will conduct primary data collection and will also use existing data for secondary data analysis, including spatial analysis with Geographic Information System software to identify and describe locations of peak mental health service need. The final product will attract a wide audience and will have broad utility for mental health system stakeholders, including city and state government policymakers, community based advocacy groups, health care system resource planners, and academic researchers.

Additional Project  
Demographic profile of city mental health clinic clients

The Fellow will work with the Mental Health and Epidemiology divisions to create a demographic profile of clients using city-operated mental health clinics. The Fellow will use electronic medical record data from city of Chicago’s six mental health clinics to describe demographic (e.g., age, gender, race/ethnicity, income, insurance status), clinical (e.g., DSM IV diagnoses, types of services used, hospitalizations or arrests within last 12 months, co-occurring substance abuse and/or other chronic diseases), and other relevant (e.g., distance from home to clinic) characteristics of clinic clients. Geographic Information System software will be used to create maps showing spatial distribution of clients relative to clinics and average distance traveled to receive services. Results from the descriptive study will be used to develop appropriate programs for clients of city-operated mental health clinics. Results will also be used to design appropriate methods to achieve random sampling of Mental Health Statistics Improvement Project (MHSIP) consumer survey.

Additional Project  
Violence Impact Assessment Tool validation

The Fellow will work with multiple divisions within CDPH (Mental Health, Epidemiology, Office of Violence Prevention, Informatics) to conduct literature reviews of existing violence data with the goal of identifying core variables (protective and risk factors) associated across multiple types of violence. The Fellow will then identify available data sources for core variables, including Chicago Police Department crime database, and Federal Bureau of Investigations crime data. At level of available location (i.e., address, census tract, police district, and community area) Geographic Information System software will be used to create maps showing distribution of violent incidents. GIS software will also be used for spatial associations of previously identified protective and risk factors with the incidence of violence. This product will be used to validate the scoping and assessment components of CDPH’s Violence Impact Assessment Tool. The Fellow will have opportunity to present their findings to a wide audience, including city agency policy decision-makers, community-based organizations, community development organizations, chambers of commerce, community advocacy groups, faith-based organizations, and broad-based public health stakeholders.
**Preparedness Role**

The Fellow will work with the Emergency Preparedness division and will collaborate with CDPH’s liaison to the Office Emergency Management (Marc Khatchadourian) to create maps showing locations of high mortality and morbidity due to mental illness, substance abuse and violence. The Fellow will use data from these maps to assist the Office of Emergency Management in developing department operations to identify and serve vulnerable mental health populations.

**Mentors**

**Primary**
- Arlene Hankinson, MD, MS
  - Medical Director, Chronic Disease and Mental Health

**Secondary**
- Nik Prachand, MPH
  - Director, Epidemiology Division