Bit of History and Some Lessons Learned in Using NASA Remote Sensing Data in Public Health Applications

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Background: The NASA Applied Sciences Program's public health initiative began in 2004 to illustratethe potential benefits for using remote sensing in public health applications.

Objectives/Purpose: The CDC initiated a study with NASA through the National Center for Environmental Health (NCEH) to establish a pilot effort to use remote sensing data as part of its Environmental Public Health Tracking Network (EPHTN). As a consequence, the NCEH and NASA developed a project called HELIX-Atlanta (Health and Environment Linkage for Information Exchange) to demonstrate a process for developing a local environmental public health tracking and surveillance network that integrates non-infectious health and environment systems for the Atlanta metropolitan area.

Methods: As an ongoing, systematic integration, analysis and interpretation of data, an EPHTN focuses on: 1 – environmental hazards; 2 – human exposure to environmental hazards; and 3 – health effects potentially related to exposure to environmental hazards. To satisfy the definition of a surveillance system the data must be disseminated to plan, implement, and evaluate environmental public health action.

Results: A close working relationship developed with NCEH where information was exchanged to assist in the development of an EPHTN that incorporated NASA remote sensing data into a surveillance network for disseminating public health tracking information to users. This project's success provided NASA with the opportunity to work with other public health entities such as the University of Mississippi Medical Center, the University of New Mexico and the University of Arizona.

Conclusions: HELIX-Atlanta became a functioning part of the national EPHTN for tracking environmental hazards and exposure, particularly as related to air quality over Atlanta.

Learning Objectives: 1- remote sensing data can be integral to an EPHTN; 2 – public tracking objectives can be enhanced through remote sensing data; 3- NASA's involvement in public health applications can have wider benefits in the future.

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