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Issue 2

MIDAS News

MISSION Tool of the Month: TranStat

TranStat is a tool performing statistical analysis on outbreak data of acute infectious disease. Using the user input of disease onset times, contact history and risk factors, TranStat tests for the presence of host-to-host transmission and estimates key epidemiological characteristics of the disease such as secondary attack rates and the local reproductive number. Computationally efficient and flexible by design, TranStat offers quick evaluation of transmissibility of newly emerging pathogens, which is the first information needed for policy-making on intervention strategies. For advanced users, TranStat is also able to adjust analysis for any number of risk factors, to handle missing data in disease outcomes, and to account for asymptomatic (silent) infections.

In addition to statistical analysis, TranStat can be used to aid power calculation in the design of clinical trials for intervention against infectious diseases and to provide parameter inputs for agent-based mathematical and statistical simulation models. A user-friendly graphical interface for TranStat will be available in the near future. TranStat is developed by Drs. Yang Yang, Jonanthan Sugimoto and Ira Longini at University of Florida. The graphical interface is being developed jointly with Philip Cooley at RTI. Inquiries about TranStat should be directed to Yang Yang at 352-273-7396 or yangyang@ufl.edu

Upcoming MIDAS Workshop Aims to Link Modeling and Preparedness

On Thursday, March 13th, MIDAS PIs, partners, and steering committee members will be presenting at the National Association of City and County Health Officials' (NACCHO) 2013 Public Health Preparedness Summit in Atlanta. Entitled "**Bringing Modeling to your Public Health Department - Why You Should Listen: Decision Support and Modeling Resources for States and Local Public Health Departments**," the workshop will examine the use of decision support and modeling resources as an important tool for state and local public health departments in disaster planning.

Organized in collaboration with the Institute of Medicine, the session will seek to provide participants with practical guidance on how modelers and public health preparedness planners can begin to work together to achieve optimal surveillance and decision making. Speakers will introduce available software, the resources (i.e., technology and skills) required to engage in decision analytics, how to build the right relationships, and most importantly, how planning efforts can be informed by modeling to support the primary working modes of health departments.

MIDAS

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MIDAS Steering Committee Spotlight: Lyn Finelli

Dr. Finelli is the Lead of the Surveillance and Outbreak Response Team, Influenza Division, National Center for Immunization and Respiratory Diseases at the Centers for Disease Control and Prevention (CDC).

As an active participant in MIDAS Network meetings for the past two years, Dr. Finelli has provided advice about modeling for public health. She is an expert on influenza and headed the CDC outbreak response team during the 2009 H1N1 outbreak. Not a modeler herself, she is familiar with the needs of CDC response teams as well as those of local, state, and territorial public health agencies.

A graduate of the Bryn Mawr Hospital School of Nursing, Dr. Finelli received her Bachelor of Science and Master of Science degree from Columbia University.

From 1983 to 1990, she taught pediatrics and public health at Columbia University and was the director of the Pediatric Primary Care Program (pediatric nurse practitioner program). She received her doctorate in infectious disease epidemiology from Columbia University, School of Public Health in 1990.

First MIDAS MISSION Hackathon Planned

The first MIDAS MISSION Hackathon is planned for late February at the MISSION Group Meeting in Las Vegas. A hackathon is a multi-day event where programmers and others work together to create, collaborate, and solve problems.

The MISSION hackathon is planned for 2 days and will end with presentations on the events activities. For more information about the MISSION Hackathon, please contact Shawn Brown.

Small Award Program for MIDAS Education and Outreach Activities

To encourage development of innovative activities by the Research Groups to address education, training and outreach, a pilot Small Award Program available to the Research Groups has been developed. These awards are subcontracts of $10,000 to $20,000 to conduct an educational outreach activity specified by the Research Group applying for the funds. In 2012, The MIDAS Education and Outreach group (RTI Information Technology Resource, Center for Communicable Disease Dynamics at the Harvard School of Public Health, and the University of Pittsburgh MIDAS National Center of Excellence) reviewed and approved two submissions, both from the Virginia Bioinformatics Institute at Virginia Tech (VBI) (PIs: Kristy Collins and Stephen Eubank):

Virus Tracker In a Box: will enhance and leverage an online software package using transmission data and create a "Virus Tracker in a Box" program for middle and high school teachers to demonstrate STEM topics such as the speed and consequence of exponential growth, network science, statistics, the biology of infectious disease, the use of freely available tools in performing data analysis and visualization, and straightforward applications to public health. This project will make science more accessible and available to K-12 classrooms through contemporary, open-source, publicly available tools.

Modeling of Infectious Disease High School Internship: will conduct a Modeling of Infectious Disease High School internship. This 1-week high school program will focus on modeling and infectious diseases. The internship will consist of several hands-on activities, research-related tours, and a discussion/lecture series and aims to show students the fun and excitement of scientific research and provide them a college experience.

For more information about the Small Award Program, contact Jennifer Alexander.