

Canadians track infectious disease threats at World Cup

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Two Canadian researchers will be keeping a close eye on what hundreds of thousands of soccer fans take to the World Cup in South Africa _ and what they potentially bring home.

Dr. Kamran Khan, an infectious disease physician and scientist at St. Michael's Hospital in Toronto, and Dr. John Brownstein, an assistant professor in the Informatics Program at Children's Hospital Boston, plan to monitor and assess potential infectious disease threats to the international soccer championship that begins Friday.

The two men first combined their independently developed intelligence systems for tracking potential threats to mass gatherings during the [Winter Olympics](#) in Vancouver.

"As global air travel becomes more accessible to the world's population, mass gatherings (like the World Cup) are increasing in both scale and frequency," said Dr. Khan. "They have the potential to attract and amplify infectious disease threats in the world."

Dr. Khan leads the BIO.DIASPORA Project, which allows researchers to study air traffic patterns and map the spread of [infectious diseases](#). The program, created in response to Toronto's SARS crisis in 2003, accurately predicted how the H1N1 [flu virus](#) would spread around the world.

Dr. Brownstein is a co-founder of HealthMap, an on-line global disease-

tracking and mapping tool that trolls the Internet for media and other early reports about outbreaks of disease. Traditional disease-monitoring systems rely on government reports, which are slower and sometimes less transparent. To view their real-time World Cup analysis online, go to <http://www.healthmap.org/fifa/>.

"Our epidemic intelligence efforts are designed to complement local surveillance for infectious disease epidemics within South Africa around the time of the World Cup" said Dr. Brownstein. "Additionally, we anticipate that our work will also be helpful in planning for future mass gatherings."

[World Cup](#) organizers expect 300,000 foreigners will visit South Africa for the month-long soccer tournament. Drs. Khan and Brownstein will focus on countries participating in the tournament plus cities around the world where air travel to South Africa is greatest during the month of June. Those cities are: London, England; Harare, Windhoek, Lusaka, Luanda, Dubai, Mauritius, Amsterdam, New York, Singapore, Lagos, Sydney and Sao Paulo, Brazil.

FIFA, soccer's international organizing committee, notes that the largest number of foreign ticket holders will come from the United States. More than 130,000 of the 2.8 million tickets were purchased by U.S. residents. England was second, followed by Australia, Mexico, Germany and Brazil.

The researchers will monitor both what travelers might bring into South Africa - which could be anything from mumps from England or Hand, Foot and Mouth Disease from Singapore -- and what they take home with them, such as Rift Valley Fever from South Africa. For example, a measles outbreak at the 1991 Special Olympics in Minneapolis- St. Paul was triggered by an athlete from Argentina, where there was a measles epidemic.

Provided by St. Michael's Hospital

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