Electronic medical record technology aids marathon participants

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Henry Ford Hospital researchers have brought the use of electronic medical records out of the hospital setting and into the streets by using the technology for a marathon.

Volunteer medical providers at the 2009 Detroit Free Press Marathon were able to coordinate care for the 19,372 participants via laptops and a website, showing that the technology can help facilitate the care of runners.

The study is believed to be the first time researchers have evaluated the viability of using electronic medical records for injury management and surveillance during a marathon.

Benefits of using an electronic medical record system were found to include:

- All medical team members were able to coordinate patient care in real time with other medical providers and hospitals.
- Race organizers and staff could quickly assist families in locating injured marathon participants or spectators along the route.
- Researchers will have data available to them that should improve the ability to identify trends in injury patterns and as such, improve the preparation for future mass participation events.

"Our study showed implementing an electronic medical record method in a mass participation setting is quite feasible and could eventually provide a wealth of data for study of injury trends," says Christopher Guyer, M.D., athletic medicine physician at Henry Ford Hospital and lead author of the study. "It could also help medical providers better prepare for future large sporting events."

Dr. Guyer presented the results at the American Medical Society for Sports Medicine's annual meeting in Mexico.

According to Running USA, a non-profit organization for the running industry, approximately 467,000 Americans complete a marathon each year, and with rising interest in the sport, has come the increased need for coordinated event coverage by qualified medical providers.

Dr. Guyer explains that in preparation for the Detroit Free Press Marathon, an information technologist with the state's Medical Biodefense Network created a secure patient intake form and event log, accessible on the Internet. The form included basic demographic data for marathon participants and spectators, as well as fields for complaint, exam, treatment and disposition data. All patient information was stored on a secure server and patient confidentiality was maintained as records reflected race bib numbers or unique identifiers generated by the application.

Medical providers from Henry Ford Hospital and the Detroit Medical Center were able to access the website by using a unique username and password, and with one training session, were able to use the system easily.

During the marathon, military-grade mobile laptop computers equipped with cellular data cards were issued to medical providers; one laptop was located at each remote first aid station and one was at the main medical

coordination center. An electronic event board was also available in the coordination center, viewable by medical command staff. The equipment was provided by the U. S. Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response Hospital Preparedness Program.

"Data from the 216 runners and spectators who sought medical attention was entered in real time by medical providers and was immediately viewable by other providers on the network of aid stations," says Dr. Guyer.

Provided by Henry Ford Health System

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