



FOR IMMEDIATE RELEASE

Hospital Study Finds Patients Not Washing Hands Could be the Missing Link in the Spread of Infection

Ultrasound-Based RTLS Provides Hospital Infection Surveillance

Stamford, CT (November 18, 2014) Health technology company Infonaut (www.infonaut.ca), a Sonitor Technologies partner in deploying advanced real time locations systems, has discovered through a University of Toronto study that hospital patients may be at significant risk of infection because of their own alarmingly poor hand hygiene. The study, published in *Infection Control and Hospital Epidemiology* entitled "Measurement of patient hand hygiene in multi-organ transplant units using a novel technology: an observational study", was undertaken in a Toronto hospital to analyze movement and behavior of hospital staff, patients and equipment. It relied upon Infonaut's Hospital Watch Live system running on Sonitor Technologies' ultrasound-based RTLS system.

The ability to continuously monitor and measure hand hygiene among hospital patients is a world first. The study found that in over 12,000 bathroom visits, patients washed their hands only 30% of the time on average. Data from meal times revealed that hand hygiene was lowest at breakfast (30%), and highest at dinner (45%). Average patient hand hygiene when entering and leaving their rooms was less than 5%, and even lower for visits to patient kitchens.

Hospital Watch Live uses ultra-accurate Sonitor positioning ultrasound tags worn by patients, staff, and equipment. Sonitor ultrasound tags are also integrated with soap and hand sanitizer dispensers to signal when they are used. The movement of people, including instances of performing hand hygiene, are captured automatically then geospatially analyzed by Hospital Watch Live.

The analysis was led by epidemiologist Dr. Colin Furness, Infonaut's director of research and knowledge development, and an adjunct professor at the University of Toronto's Faculty of

Information. Dr. Furness worked with first author Dr. Jocelyn Srigley, the associate medical director of infection prevention and control at Hamilton Health Sciences.

“The extent of this problem has not been visible until now, because it has not been measurable until now,” says Dr. Furness, a co-inventor of Hospital Watch Live. “Enormous resources are devoted to research and practice for improving staff hand hygiene compliance, but patient hand hygiene has received scant attention,” he added.

The study suggests that there may be significant benefits to including patients in hand hygiene promotion campaigns. “This is important because getting patients to wash their hands more could potentially reduce their risk of picking up infections in the hospital,” said Dr. Srigley.

Many dangerous pathogens commonly found in hospitals, including *C. difficile*, are transmitted via the ‘fecal-oral route’: they enter through patients’ mouths via contaminated surfaces in bathrooms and other areas. “Patients’ mouths are surely touched the most by their own hands, not healthcare workers’ hands,” Dr. Furness said.

Supported by a grant from Canada Health Infoway, financing by the Health Technology Exchange and by Infonaut Inc., technical development from George Brown College, and in-kind contributions from GOJO Industries, this study was one of a series of research projects undertaken during a commercialization trial of Hospital Watch Live in Toronto, using Sonitor ultrasound receivers placed throughout the facility communicating with tags on patients. Recently, the same research team published their findings showing that hand hygiene rates triple among healthcare workers when a compliance auditor is visible.

“Very little is known about hand hygiene as a complex social and situational behaviour,” emphasized Dr. Furness, who is also a social scientist. “This narrow focus by hospitals on staff hand hygiene compliance does not capture this complexity,” he added. “Through our work, we have gained a lot of insight into environmental design and other factors that appear to influence hand hygiene behavior.”

“Infonaut’s goal is to take our client hospitals beyond staff hand hygiene compliance, to answer difficult ‘how’, ‘where’ and ‘when’ questions,” said Infonaut CEO Niall Wallace. “Nobody else has done this measurement and developed this expertise.” Based on its commercialization experiences in Toronto and the current measurement work with its partner, the [Jacobs Institute](#), in Buffalo, NY, Infonaut will offer infection control consulting to hospitals.

“Sonitor’s ultrasound RTLS solution has been instrumental in helping bring Infonaut’s innovation to market as their ease-of-installation and accuracy is unparalleled in the industry. This type of insight and advanced research would not be possible without the Sonitor RTLS solution,” said Mr. Wallace.

Anne Bugge, President and CEO of Sonitor Technologies, Inc. added, “We are pleased that Sonitor’s ultrasound RTLS technology, together with our partner Infonaut’s software, has contributed to

establishing a better understanding of how infections spread in hospitals and what can be done to reduce this potentially very harmful and costly risk for patients and caregivers alike.”

About Sonitor Technologies, Inc. (www.sonitor.com)

Sonitor Technologies’ tiered resolution Real Time Locations Systems (RTLS), with patented High Definition Ultrasound capabilities, are specifically developed and designed for indoor positioning in complex environments. Sonitor has developed the healthcare industry’s most advanced open integration RTLS platform, Sonitor Sense™, a wireless system which supports a wide range of applications to make hospital operations more efficient. Sonitor is selected by world-class partners to build industry-leading solutions for global deployment. Visit Sonitor at www.sonitor.com

About Infonaut

Infonaut is a healthcare IT company founded in 2006 that has grown from the unique expertise created during the SARS crisis in Toronto to be recognized internationally for our approach to addressing hospital acquired infections. Infonaut’s goal is to take our client hospitals beyond staff hand hygiene compliance, to answer the difficult questions of when, where and how infections are spread. Infonaut is delivering world-leading, innovative, solutions for hospitals and public health that will save lives, save money and empower those charged with protecting the public from disease and infections.

For more information, contact:

Sonitor Technologies

Dan Conley
Beacon Communications
dconley@beaconpr.com
312-593-8461

Infonaut

Niall Wallace
CEO - Infonaut Inc.
www.infonaut.ca
416 432 8348