



Recognitions

Heron's successful Patient Administration System (PAS) is recognized for its speed, efficiency and functionality.

Ministers of Health, hospital administrators, and leading health sector managers agree that the HERON PAS has been effective in reducing admitting times and acknowledge its invaluable capability in the tracking of injury and other health conditions or diseases.

Real change is about readiness and the right tools. When it comes to Patient Administration Systems and Health e-Surveillance capability, Heron Technology's extensive field-proven health informatics systems, based on validated business processes, are helping clients transform the way they deliver and track health outcomes. Heron salutes these clients in their insistence that the tools they use for this critical function be benchmarked, useable and affordable.

The system that more leading healthcare providers around the world in developing countries are putting their confidence and trust in, is the Heron PAS/Surveillance system. Outstanding reviews on the Heron system, addressed from those who are setting the standard in international health delivery, demonstrate the power and value of the Heron software suite. There indeed DOES exist today an affordable solution, that generates accurate, timely information for enabling decision criteria at the highest levels of healthcare delivery and management. That system is the Heron PAS/Surveillance suite.

CDC – Centers for Disease Control and Prevention - country references

Heron's team appreciates the statement from Yvette Holder (Guest Editor of the CDC for the IC&SP document) that

"the JISS/PAS is, to the best of my knowledge, the first, and probably still the only, fully computerized, wide-area networked national surveillance system in the Western Hemisphere."

[That is still the case as of September 2005].

[JISS: Jamaica Injury Surveillance System, IC&SP: Injury Control & Safety Promotion]

- A detailed report on the review of the JISS/PAS implementation in Jamaica from the CDC sponsored team was published in the journal of "Injury Control and Safety Promotion (IC&SP)- Vol.9, NO 4. There were 26 health experts on the team, including 6 from the CDC, who spent months studying and reporting on the Heron JISS/PAS as covered in the 8 article, 57 page review. (11) (14)

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PAHO and WHO Acknowledgements:

- Positive recognition from PAHO for the Heron JISS/PAS implementation in Jamaica, as PAHO supports the Jamaican Ministry of Health's implementations. (01)
- PAHO continues its support, organizing a weeklong, 8-person, 4 country visit to Jamaica in March 2003 to review the JISS. (02)

The success of the JISS/PAS and e-surveillance model is being sought around the world:

- **GENEVA, SWITZERLAND**, January 2004: As one of 19 attendees, Dr. E. Ward of the Ministry of Health in Jamaica, participates in the creation of the new Violence Prevention Alliance (VPA). Jamaica was the first country to introduce e-surveillance for violence, and is today still the only country with an operational e-surveillance violence system. (07)

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HERON
Enabling better health care through effective IT solutions

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Canadian Society for International Health

Canadian Company involved in Jamaica injury surveillance

Injuries treated in the accident and emergency departments across Jamaica cost the health care system up to 35% of its total annual operating budget. Now one of CSIH's newest corporate members, Heron Technology Corporation (Heron), of Toronto, is helping track those injuries.

Heron has been working in Jamaica for the past three years as part of a Citizen Security and Justice Program developed by the Jamaican government and the Inter-American Development Bank. The project began in 1998 when Heron integrated a Violence-Related Injury Surveillance System (VRISS) into the computerized PAS at the 450-bed Kingston Public Hospital to allow patient information on violence-related injuries to be recorded.

In collaboration with the U.S. Centers for Disease Control and Prevention, the system is gathering data on violence-related injuries

treated in the accident and emergency departments of many hospitals in North America and the Caribbean. The aim is to better understand who is at risk, where the incidents occur, who is perpetrating violence within society and what is the cost to the health sector.

Since then, the system has now been expanded to include the surveillance of all injuries and has been expanded to all other hospitals in Jamaica using Heron's Patient Administration System software.

According to Dr. Elizabeth Ward, chief of Epidemiology in the Jamaican Ministry of Health, the major advantages of the Heron software include: **"its ability to capture specialized data, for example injury data, and its ability to have access to the Patient Administration System software system data in one computerized format that can be merged at a central level:"** She adds, **"The Patient Administration System has proven to be a cost-effective means of gathering health data."**

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World Report On Road Traffic Injury Prevention Launched In France – JMOH Official Represents The Americas

One of Jamaica's noted epidemiologists was selected by the World Health Organization (WHO) to represent the Americas on the WHO/World Bank World Report on road traffic injury prevention, which was launched on World Health Day, April 7, 2004.

Dr. Elizabeth Ward, Director of Disease Prevention and Control in the Ministry of Health attended and participated in the launch which took place in Paris, France, in April 2004.

The report documented what is currently known about road traffic injuries globally, their impact on public health, the factors which place people at risk of such injuries, and the solutions to prevent them.

Anna Treasure, Acting Representative of the Pan American Health Organization (PAHO) in Jamaica, an arm of the WHO, says the local office was pleased that Dr. Ward was part of the realization of the report.

"The World Health Organization is constantly using Jamaican professionals to boost technical assistance on projects. They have always recognized Jamaican talent and the high level of professionalism existing in local institutions," she asserts.

"It is nice that WHO has singled us out and it is really good for Jamaica that WHO has recognized that we are taking road accident injuries and injury epidemiology very seriously."

The opportunity to participate, Dr. Ward notes, speaks volumes about the invaluable work of the National Road Safety Council and the **Jamaica Injury Surveillance System (JISS)**. "The fact that WHO is really giving us a position to have an input and to gain firsthand information on the best practices across the world is an honour," she says, noting that data from Singapore or Thailand was probably more cost effective and appropriate for Jamaica, rather than for example, the United States, whose interventions were usually more costly and probably hi-tech.

The Director says that her attendance at the event was "really in an advocacy capacity. It is really to meet the biggest players, the most influential people in terms of road safety the President of France [Jacques Chirac] and the Director-General of WHO [Dr. Jong-wook Lee] will be present among other distinguished people", she informs.

"We all have to look at road safety as a developmental issue, not just a health issue and, how we can have a major impact in preventing all the mortality and morbidity in population as well as save on resources," Dr. Ward stresses.

Elaborating on the Jamaica Injury Surveillance System, which has brought worldwide attention to Jamaica, Dr. Ward explains that the system came about when the Ministry, specifically the Health Promotion and Protection Unit, was analyzing hospital data. "We were looking at the data outside of obstetrics and we saw that injuries were the second leading cause of admission to hospitals islandwide," she says.

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Road safety focus and the Jamaica Injury Surveillance System

Earlier this month, Maxine Henry-Wilson, Minister of Education, noted that statistics from the Road Safety Unit indicated that in 2003, Jamaica recorded 4,432 traffic accidents, 392 of which resulted in fatalities, with 51 being children. The statistics further revealed that 29 of the children were pedestrians, either crossing the road or standing on the sidewalk.

The **Jamaica Injury Surveillance System (JISS)** showed that in 2003 pedestrians accounted for the majority (39 per cent) of the persons who visited the accident and emergency departments of nine government hospitals and subsequently died from motor vehicle accident-related injuries; 44 per cent of the children were under 18 years old. © 2004 Gleaner Company Ltd. By Trudy Simpson. To read the entire article, email us at info@herontech.com

CDC – Centers for Disease Control and Prevention – country references *Continued from page 1*

- Heron's expertise on the JISS, combined with the Jamaican Ministry of Health's (JMOH) commitment for making real change has created the success story that many leading health organizations are taking note of. (e.g. Pan American Health Organization-PAHO, the World Health Organization-WHO, Centers for Disease Control- CDC, Atlanta, Georgia, and the Canadian Society for International Health-CSIH).
- Outstanding reviews on the Heron system, addressed from those who are setting new standards in international health delivery, demonstrate the power, simplicity, value and affordability, of the Heron software suite. Seeing is believing, and a growing number of developing countries who have studied the JISS implementation, are joining in, putting their confidence and trust in the Heron PAS/Surveillance system. These growing implementations demonstrate that there indeed DOES exist an affordable solution today, one that generates accurate, timely information for enabling decision criteria all the way to the highest levels of healthcare delivery and management.
- Heron was part of the working group in 1998 along with the CDC and JMOH teams, that designed the JISS (p.227 of IC&SP) (12)
- A CDC reviewer relates "the JISS/PAS could be a model for other developing countries and developed countries" (p.233) (13)
- Heron's team brings a statement from Yvette Holder (Guest Editor of the CDC for the IC&SP document) that "the JISS/PAS is, to the best of my knowledge, the first, and probably still the only, fully computerized, wide-area networked national surveillance system in the Western Hemisphere." [That is still the case as of September 2005]. (14)
- Heron was invited to provide a guest speaker at the International Collaborative Effort (ICE) on Injury Statistics World Conference held in **CUERNAVACA, MEXICO**, June 01-03, 2005. (15)

CSIH – Canadian Society for International Health:

- Recognizing the importance of the JISS national health surveillance implementation, the CSIH covered this world first in the summer 2001 issue of SYNERGY. It was reported that Jamaica had implemented an e-Surveillance system to monitor the serious problem of Violent Injury in the country, as this was a major cost component to the Ministry of Health's budget. (16)
- Heron's team brings a field-proven PAS (the business process), a software pricing formula (GDP per capita-based), and technology approach (Linux, thin-client, server centric, standardization, etc.) that now provides all countries with the opportunity to computerize the health sector, within their annual health budget. (17)

Other Success Attributes of the Heron Approach

- Field-proven business process success behind the Heron PAS, matched with a software pricing formula that is GDP per capita-based. (17)
- Heron has available the sovereign guarantee of the Canadian Commercial Corporation (CCC) for its foreign country implementations. The CCC reports to the Government of Canada and this sovereign guarantee was extended to the Government of Jamaica in 1997, which started the PAS/JISS implementations. Details on the CCC sovereign guarantee on page 6.

HERON IN THE SPOTLIGHT

Centers for Disease Control (CDC), National Center for Health Statistics (NCHS)

The twelfth annual meeting of the CDC – NCHS International Collaborative Effort was held in Cuernavaca, Mexico, June 1-2, 2005. The agenda included speakers from 15 countries (representing 27 countries) who spoke on the subject of Injury Surveillance in their respective countries (or group of countries). Heron Technology Corporation (Heron) was invited to speak on the subject of the Injury Surveillance implementation in Jamaica and specifically on how it was developed to replace the earlier "forms based" system and on the benefits of having Injury Surveillance integrated into the In-Patient PAS (Patient Administration System).

What is ICE on Injury Statistics?

The International Collaborative Effort (ICE) on Injury Statistics is one of several international activities sponsored by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS). The goal is to provide a forum for international exchange and collaboration among injury researchers who develop and promote international standards in injury data collection and analysis. A secondary goal is to produce products of the highest quality to facilitate the comparability and improved quality of injury data.

Mission: The mission of the Injury ICE is to improve international comparability and quality of injury data. The ultimate aim is to provide the data needed to better assess the causes and consequences of injury, differences in injury occurrence over time and place, and the most effective means of prevention and control.

Vision: There will be injury statistics, which are internationally comparable and useful for injury prevention and control.

Visit the CDC website for Heron's Presentation

http://www.cdc.gov/nchs/ppt/ice/cuernavaca/hebert_heron.ppt

The screenshot shows the CDC website's agenda for the ICE on Injury Statistics Meeting. The page has a blue header with the CDC logo and navigation links for 'CDC Home', 'Search', and 'Health Topics A-Z'. The main content area is white with a blue border. It features the NCHS logo and the text 'National Center for Health Statistics... Monitoring the Nation's Health'. The agenda is titled 'Agenda for ICE on Injury Statistics Meeting' and lists the following items:

- 8:30: Opening Remarks**
 - Facilitator: Lois Fingerhut, USA
- 8:45: Strengthening Violence and Injury Surveillance in Eastern Caribbean: Challenges and Opportunities**
 - Facilitator: Patricia Brandon, Barbados
 - [View/download PPT](#) 606 KB
- 9:00: Jamaican Injury Surveillance System**
 - Facilitator: Ron Hebert, Heron Technology
 - [View/download PPT](#) 386 KB
- 9:15: Organizing A Pilot Project on Violent Injury**



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SECRETARY AND THE FOLLOWING

November 14, 2002

Ron Hébert
Heron Technology

Canadian Awards for International Cooperation - Jamaica PAS

The **Ministry of Health Jamaica** embarked on a process of computerization of hospitals. This has been done utilizing a Patient Administration System (**PAS**) developed by **Heron Technology Corporation**, which has seen the computerization of eleven of the twenty-two hospitals across the island. This system provides a standardized data platform that collects data on 70% of the discharged patients from hospitals islandwide.

The PAS has been customized allowing for the addition of modules readily adaptable to the users needs. In Jamaica four modules have been added to the **PAS** to allow for injury surveillance. This system called the Jamaica Injury Surveillance System (**JISS**) contains modules for tracking motor vehicle accidents, violence related injuries, accidental injuries and attempted suicides. The availability of these data characterizing injuries has allowed for production of reports both at the local and national level and provides guidance for an intersectoral approach to activities aimed at reducing the disease burden due to injuries.

Another planned development is to add an occupational injury module to **JISS** and this will be presented in June 2003 to other health personnel within the Caribbean region and to **PAHO** Occupational Health and Safety Division. These developments are a clear indication of the interest in what Jamaica is doing re the utilization of computers in health care within the **PAHO** region.

Yours sincerely

Dr. Elizabeth Ward
Director, Disease Prevention and Control

WILL IT WORK IN CANADA?

Infoway Announces \$100 million Public Health Surveillance Investment Strategy

Montreal, March 3, 2005 – Canada Health Infoway has announced the approval of an investment strategy providing a total of \$100 million (USD \$80M) for the enhancement of pan-Canadian public health surveillance. The aim is to help public health professionals better detect and respond to outbreaks of communicable diseases, such as severe acute respiratory syndrome (SARS).

“Communicable disease surveillance is a priority of critical importance for the safety of all Canadians,” said Dr. David Butler-Jones, Canada’s Chief Public Health Officer. “I am very pleased that Canada Health Infoway is proceeding to invest the funds provided by the federal government to enhance public health surveillance in Canada. This investment will help improve the capacity of public health professionals to respond to public health threats and better prepare for the future.”

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The success of the JISS/PAS and e-surveillance model is being sought around the world

Continued from page 1

- **PARIS, FRANCE**, April 2004: Dr. E. Ward represented the Americas, speaking on road traffic surveillance. Jamaica has had e-Surveillance of road traffic in live operation since 1999. (03)
- **VIENNA, AUSTRIA**, June 2004: Yvette Holder, formerly of the CDC and Dr. E. Ward present the Jamaican model for PAS and e-surveillance. (04)
- **CHILE**, July 2004: Dr. E. Ward presents and reviews the experience with the JISS/PAS. (06)
- **JAMAICA**, November 2004. The Jamaican Government announces the initiation of the VPA program in the country. The Hon. John Juror, Minister of Health, stated that the VPA would be via an “evidence-based public health approach”, and this is possible because of their operational JISS/PAS since 1998. (08, 09)
- **LIVERPOOL, ENGLAND**, March 10/11 2005: Dr. E. Ward participates in the conference 'Preventing Violence: From Global Perspective to National Action'. (10)
- **DOMINICA**, April 2005: Following Jamaica's and Montserrat's lead, implementation of the PAS/Surveillance proceeded after Dominica's participation in the PAHO sponsored visit to Jamaica in March 2003.
- **MONTSERRAT**, June 2005: Implementation of the Heron PAS/Surveillance is now in live operation.
- **GUYANA**, July 2005: The WHO invites Dr. E. Ward to provide guidance to their Health Ministry on surveillance systems.

Do most Health IT systems turn out to be successful? No, they do not.

In fact, according to the BMJ (British Medical Journal), most IT outcomes are far from satisfactory: Most implementations result in FAILURE. <http://bmj.bmjournals.com/cgi/content/full/326/7394/860>

SAMPLES OF SOME OF THE REPORTED FAILURES:

Department blows R116m (USD\$30M) on unusable IT system in South Africa

In what has been described as one of the worst cases of abuse of public funds, the Northern Province Health Department has paid an international computer company R116-million to install an information technology system it cannot use. The department has now engaged another company to undo the prime vendor's work. The new company, Ethniks, has been awarded a R94-million tender to remove the original system and install a brand-new system.

In 1995, the department invited tenders for the installation of a system that was meant to co-ordinate information in the province's 43 hospitals. The system was also supposed to be linked to the department. The prime vendor was awarded the contract, and the work was supposed to have been completed in three years. However, Health Department budgetary constraints resulted in the installation of the system in only 23 hospitals in the prescribed time. Although the initial amount stated in the tender documents was R110-million, the prime vendor was paid R116-million, according to Health MEC Sello Moloto. Moloto would not explain why the prime vendor was paid R116-million even though it had installed the system in only 23 of the province's hospitals. He admitted that the system that had been installed by the prime vendor would not be used and was being removed by Ethniks.

Note: Both the prime vendor and Ethniks systems failed for a total of R210m (USD 50 million).

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<http://new.hst.org.za/news/index.php/20011023>.

USA – Kaiser Permanente Rejects \$1 Billion In-house Development of an EHR

<http://www.computerworld.com/databasetopics/data/story/0,10801,78384,00.html>

For copies of the articles below, email us at info@herontech.com

- **India, ORISSA State – 32 Regional Hospitals Fail with a TCS PAS**
- **India, Delhi – AIIMS (All-India Institute of Medical Sciences), India's largest public hospital (1,700 beds), fails to implement a TCS PAS by 2001, after trying to do so since 1989 (Hindustan News)**
- **Canada – Toronto General Hospital, US\$100 Million Failure**
- **UK – US\$30 Million Failure**

75% Failure Rate

In evaluating computerized health information systems, hard lessons are still to be learnt.

Enormous investment has gone into computerized hospital information systems worldwide. The estimated costs for each large hospital are about USD\$50m, yet the overall benefits and costs of hospital information systems have rarely been assessed.

When systems are evaluated, about three quarters are considered to have failed, and there is no evidence that they improve the productivity of health professionals or health outcomes.

Why are computerized health information systems prone to failure?

- Failure to take into account the social and professional cultures of healthcare organizations and to recognize that education of users and computer staff is an essential precursor.
- Underestimation of the complexity of routine clinical and managerial processes.
- Dissonance between the expectations of the commissioner, the producer, and the users of the system.
- Implementation of systems is often a long process in a sector where managerial change and corporate memory is short.
- "My baby" syndrome.
- Reluctance to stop putting good money after bad.
- Failure of developers to look for and learn lessons from past projects.

©2005 By Peter Littlejohns, professor, Jeremy C Wyatt, professor, Linda Garvican, senior research fellow. British Medical Journal.

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USD\$50 Million Failure

Report Prepared For The Health Systems Trust – The Medical Research Council Of South Africa, Pretoria, May 2002

Heron note: *This report is on the failure to implement an HIS in 23 (of 42) public hospitals, starting in 1998, and ending in 2001. The prime vendor started, and then a local firm, Ethniks was selected to replace prime vendor in 2000, and the implementation was cancelled in 2001. Overall, it is reported that the failure cost Limpopo province USD\$50 million. The full 87-page analysis prepared by MRC is at:*

ftp://ftp.hst.org.za/pubs/research/his_np.pdf

Excerpts from the report

In 1995 the National Department of Health (NDOH) established a National Committee to develop a National Health Information System Strategy for South Africa (NHIS/SA). The committee was made up of members from each of the nine provinces. The objective of the NHIS/SA was to provide management information for managers and health workers. The committee identified patient care and financial information systems as crucial for country health care management.

As a response to national strategy and in recognition of provincial need, in 1998 the Northern Province started to implement an integrated computerized Hospital Information System (HIS) in its 42 hospitals. The decision to implement HIS in this province coincided with the provincial need to restructure services, which involved shifting resources from tertiary and secondary care levels to the primary care level. Hospital Information System (HIS) was one of the restructuring strategies in the Northern province.

The two main objectives of the HIS were as follows:

- Improve patient care by providing patient information within and between hospitals
- Improve health system management in general, beyond patient care

Heron observation of above: *The time required to implement an HIS in Canada has typically taken over 15 years, and even then very few, if any, Canadian hospitals (out of 1,000) ever ended up with a fully integrated IT environment.*

In Limpopo the HIS was expected to be implemented in about three years. This is an unrealistically far too short a period of time, that sets expectations from the very beginning that are not going to be met, dooming the project from the get-go. This is particularly the case for a first time user in a developing country.

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The Heron PAS has been running successfully (99.995%) in a real work environment in Jamaica

According to Peter Wright, Senior IT adviser at the Jamaican MOH: "The performance of the Heron PAS is second to none. It has functioned with very limited downtime [only 72 hours] since its implementation. Collectively, there are more than 100 users, working 24 hours a day, 7 days a week, in the five institutions.

Accordingly, the up time experience equates to an impressive 99.995% during the past two years (Phase 1 – 1997-1998), the equivalent of over 1.5 million hours of end-user operation."

Mr. Wright adds, "This is attributable to Heron's solid application program code, and to the very stable UNIX operating system."

The difference between Success and Failure can lie with the "Sovereign" Guarantee (100%) offered by the Canadian Government.



Canadian Commercial Corporation (CCC) and the 'Sovereign' Guarantee

A very important consideration associated with international marketing is the aspect of the purchasing country receiving a **'Sovereign' Guarantee** from the selling country. This sovereign guarantee was extended to the Jamaica MOH by CCC in 1997 for the HERON PAS implementation, and can be anticipated in other countries, depending upon the business contract. CCC has shown considerable interest in HERON through an article in the 1998 CCC Annual report and through a write up in CCC's newsletter, the Exporter, in 1999.

What is the Canadian Commercial Corporation (CCC) and why is their assistance important?

First, there are fewer risks for buyers, thanks to the Canadian Government-backed contract performance guarantees. This is of crucial importance, for example, when an interesting new technology is purchased from a Canadian company. In such a case, if there was a problem during the project, the CCC would intervene and, if necessary, replace the Canadian supplier.

Second, Canadian suppliers are identified and evaluated. The CCC can play the role of agent for a buyer making purchases, examine the technical, administrative and financial capabilities of the Canadian company in question and guarantee contract performance.

Third, the purchasing process is simplified. The CCC can help conclude negotiated contracts or sole source contracts, especially with government buyers, by evaluating the capabilities of the exporter in question and the Canadian supplier's prices and costs, and by providing a Sovereign Guarantee of the contract.