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Dr. Lisa V. Luly-Rivera of the University of Miami put her hospitalist skills to use during a 5-day visit during the second week following the earthquake in Haiti.



COURTESY AMIR K. JAFFER

Haitian Patients Receive Help From U.S. Hospitalists

“You’re not just doing hospitalist work. You’re doing everything. You’re just there to take care of patients in whatever way you can.”

BY ROBERT FINN

When Dr. Lisa V. Luly-Rivera admitted the 14-year-old girl to the University of Miami’s tent hospital at the airport in Port-au-Prince, the girl’s leg was edematous and she had some hyperpigmentation. But between one day and the next, her leg became warm, and the warmth started moving up to-

ward her thigh. The leg was clearly infected.

The surgeons, fearing necrotizing fasciitis, wanted to amputate. Dr. Luly-Rivera, a hospitalist at the University of Miami who was in Haiti to help earthquake victims, found herself arguing with the surgeons.

“No, that’s not what you do and you know it,” she recalls saying. “You don’t just have to preemptively amputate.”

She pointed out that the girl could still move her leg, and it had some range of motion. She knew she had some good antibiotics—Rocephin, Flagyl, and Clindal—to provide multiorganism coverage. So she insisted that the surgeons do a fasciotomy.

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Infections Tied to STEMI Mortality And Length of Stay

BY MITCHEL L. ZOLER

ORLANDO — Infection following acute hospitalization for ST-segment elevation myocardial infarction was linked with prolonged hospitalization and significantly increased risk of death, in a review of more than 11,000 patients in Florida hospitals in 2006.

The incidence of in-hospital infection among the 11,879 patients hospitalized in Florida for ST-segment elevation myocardial infarction (STEMI) was 17%, with more than a third of these patients having two or more infections while hospitalized, Michelle C. Nash and her associates reported in a poster at the annual scientific sessions of the American Heart Association.

The most common infections were urinary tract (in 6%), pneumonia (5%), surgical site (4%), and bloodstream (3%). Other infections collectively affected another 4% of the patients, she reported.

Among STEMI patients without an infection, 16% had a length of stay of 7 days or more. Among infected patients, the percentage who required hospitalization for a week or longer ranged from a low of 45% in patients with surgical

site infections to a high of 75% in those with bloodstream infections (see box), said Ms. Nash, a researcher in the department of epidemiology and biostatistics at the University of South Florida in Tampa, and her associates.

In addition, while surgical site and some other infections led to mortality rates nearly identical to the 7% rate in STEMI patients who never developed an infection, other types of infection led to a substantially increased in-hospital mortality rate, such as the 31% rate in patients with bloodstream infections and the 20% rate in those with pneumonia.

In-hospital infections also boosted the risk that STEMI patients would need mechanical ventilation or would develop renal failure or heart failure. “Notably, patients with miscellaneous infections, not those with pneumonia, had the greatest risk for mechanical ventilation” at 25%, compared with 5% in patients who developed pneumonia, the researchers said.

Their analysis also examined demographic and clinical features that appeared to be linked with an increased susceptibility to infec-

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WHAT'S NEW

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- **Palliative care** and communication with patients and family members poses a challenge for physicians dealing with end-of-life



issues in the ICU, according to Dr. Tomer T. Levin. **4**

- **Transfusions** of red blood cells stored for 14 days or more may increase the risk of bad outcomes in children in critical care. **7**
- **Surgical site infections** can be prevented through preoperative use of a chlorhexidine-alcohol prep, while PCR screening and nasal

decolonization may help avoid *Staphylococcus aureus* infections. **11**

- **VTE prophylaxis** that’s extended for 15 days or longer leads to markedly lower event rates after total hip or knee replacement surgery. **16**
- **Quality measures** for myocardial infarction, heart failure, and pneumonia show further gains in the latest Joint Commission report. **19**

- **Leaders column** describes Dr. Karen Wilson’s research at the University of Rochester aimed at better understanding how previous exposure to secondhand smoke may lead to complications in high-risk children who end up hospitalized for respiratory illnesses. **21**



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Caring for Earthquake Victims

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Then she treated the girl with IV antibiotics and hoped the infection would abate. It did, and the girl kept her leg.

Dr. Luly-Rivera arrived in Haiti just 8 days after the devastating earthquake on Jan. 12, 2010. A Haitian-American who was born in Queens, N.Y., Dr. Luly-Rivera has many friends and relatives still living in that poverty-stricken country, and fortunately none was seriously hurt. But she knew that her skills as a hospitalist—and the fact that she spoke fluent Creole—could be put to good use during her 5-day visit.

She wasn't alone. The University of Miami Leonard M. Miller School of Medicine has had a presence in Haiti since 1994 through Project Medishare, a program founded by Dr. Barth Green and Dr. Arthur Fournier. University physicians quickly organized into teams that would spend 5 days in Haiti providing emergency medical and surgical care.

At first they set up a hospital at a United Nations facility, but just a day after Dr. Luly-Rivera and her hospitalist colleague Dr. Amir K. Jaffer arrived, the university constructed a field hospital at the Port-au-Prince airport. The hospital, in four large tents with three operating rooms, was equipped to handle 250 patients.

Two days after the field hospital opened, the first radiology machine arrived. "Patients were already getting amputations in the operating room for injuries that were not likely to heal or that were leading to wound infections or compartment syndromes," Dr. Jaffer recalled. "But those where the fractures were more occult, where they were not visible but they still had a lot of pain,

they were splinted and stabilized. And then they started to get casts when we had an x-ray machine available on-site."

Dr. Jaffer, who has special expertise in deep vein thrombosis (DVT), was glad to see that the hospital had heparin and low-molecular-weight heparin. Many patients had fractures of a long bone, so Dr. Jaffer started these high-risk patients on prophylaxis.

Dr. Jaffer and Dr. Luly-Rivera both said they did anything that needed doing, from starting IV lines to bringing food to patients. But they also used their training as hospitalists to co-manage patients along with the surgeons. The hospitalists managed patients' fluids, pain, and antibiotics.

They worked in shifts that were nominally 12 hours long, but sometimes ended up lasting 15 or even 20 hours. During a night shift, Dr. Luly-Rivera noticed something strange about a 17-year-old boy she had admitted the day before. The boy had a hemopneumothorax, but no chest tubes were available, so the surgeons had improvised one with a Foley catheter and some surgical tubing.

That night Dr. Luly-Rivera noticed the boy was lethargic and unresponsive, although she recalled he had been able to follow commands earlier in the day. "I said to myself, 'OK, we don't have all of the resources here. We have to send him to the Israeli hospital [which

was better equipped].' So I woke up the entire surgical team," she said. "I said, 'This patient is going to crash tonight if we don't transfer him.' And everyone started arguing: 'We don't have security.' 'How are we going to transfer him over?' 'Well, he's not crashing right now.' And I said, 'He will die tonight if we don't do something.'"

Dr. Luly-Rivera found some of the EMTs who were there from Miami, who

was going on ... and to see the suffering of the patients. It was difficult to see all the children being amputated, the adults. I just left there with the sense of, what's going to happen to this generation of people? It was very disheartening."

Dr. Jaffer said that he was struck by how calm everyone at the hospital was. "I was amazed with how patient people were," he said. "I did not ever see anybody in my 5 days there getting angry

with anyone else. ... I was amazed at how patient these Haitian people were with both each other and the help they were getting from people around them."

On the other hand, "there was a lot of fear in these people's eyes and their body language. We would talk to them about what their fears were, but the truth of the matter is there was no systematic way to address that." Addressing the posttraumatic stress disorder after such an event "is something we need to think about," said Dr. Jaffer, adding that he saw no psychiatrists or other mental health professionals while he was there.

Dr. Luly-Rivera urged other hospitalists to spend a few days helping out in Haiti. "As hospitalists, a lot of people are scared to go there," she said. "They don't know what to expect. You're not just doing hospitalist work. You're doing everything. You're just there to take care of patients in whatever way you can. The experience was so rewarding for me. I want to go back. But it does take a toll on you. You come back changed." ■



Among the U.S. physicians responding to the crisis in Haiti were Dr. Mario Reyes, chief of hospital medicine at Miami Children's Hospital; Dr. Barth Green, chief of neurosurgery at the University of Miami and a founder of Project Medishare; and Dr. Amir K. Jaffer, chief of hospital medicine at the University of Miami.

agreed to have the boy transferred to the Israeli hospital, where he got a proper chest tube. "He was so critical that they shipped him to the U.S.N.S. Comfort [the U.S. Navy's hospital ship docked at the waterfront]. I just got a report back on Tuesday. He's doing much better."

Dr. Luly-Rivera expressed mixed emotions about her experience in Haiti. At first she said, "I enjoyed my time down there," but a minute later she said, "It was extremely difficult to witness what

Joint Commission Reports More Gains on Quality Measures

BY MARY ELLEN SCHNEIDER

U.S. hospitals have improved the care they provide for patients with myocardial infarction, heart failure, and pneumonia, according to a report issued last month by the Joint Commission.

Hospitals accredited by the commission are adhering to quality measures for MI patients 97% of the time, up from 87% just 7 years earlier. The results are part of the Joint Commission's annual report on quality and safety, which also reported that in 2008, hospitals provided evidence-based heart failure care 92% of the time (up from 60% in 2002), and evidence-based pneumonia care 93% of the time in 2008 (up from 72% in 2002). (See box.)

Composite scores were calculated using data drawn from all Joint Commission-accredited hospitals between 2002 and 2008. Children's asthma care was surveyed for the first time

in 2008, with two subcategories both scoring over 99%.

"This improvement translates into significant enhancements in terms of morbidity and mortality across the conditions that we're measuring," Jerod M. Loeb, Ph.D., executive vice president for quality measurement

and research at the commission, said in an interview. For 8 of the 28 measures tracked in 2008, hospitals had consistently high performance, with about 90% of hospitals scoring 90% or more.

Dr. Loeb described hospitalists as one of the driving forces behind this success. Although there

is no literature yet to back up the claim, he said he believes that in organizations with hospitalists, fewer things fall through the cracks and more attention is paid to standardization.

Dr. Loeb said the Joint Commission does not advocate "cookbook medicine." The quality measures endorsed by the commission allow for clinical judgment, and scores do not decline when organizations deliver care that is contrary to the measures but clinically appropriate for individual patients, he said.

Despite the successes documented in the report, hospitals are still struggling on a few measures. For example, hospitals in 2008 scored only 52% on providing fibrinolytic therapy to heart attack patients within 30 minutes of arrival. Also, hospitals in 2008 scored only 60% on providing antibiotics to ICU pneumonia patients within 24 hours of arrival. Both measures were introduced in 2005.

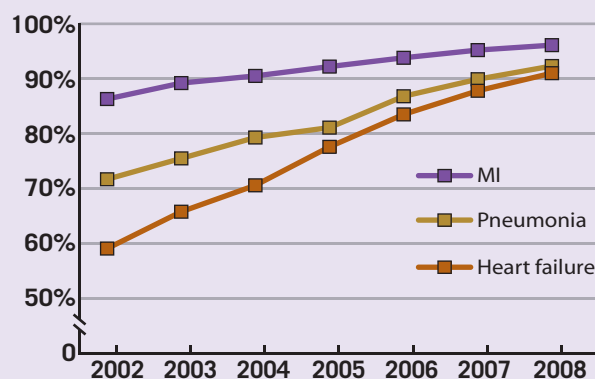
In some cases it takes a few years for hospitals to make progress on a new measure. Joint Commission officials saw this with measures calling for clinicians to provide smoking cessation advice. In 2002, hospitals scored 37.2% on providing smoking cessation advice to pneumonia patients, but that number jumped to 96% in 2008.

"The learning curve in health care is lengthy," Dr. Loeb said. "For those things that we've been measuring for a longer period of time, organizations are doing better."

For measures related to antibiotic administration, the numbers have been slower to climb because of ongoing controversy about when antibiotics are appropriate, he added. ■

"Improving America's Hospitals: The Joint Commission's Annual Report on Quality and Safety 2009" is available online at www.jointcommission.org.

Hospital Adherence to Joint Commission Composite Quality Measures



Note: A total of 3,219 accredited hospitals contributed data.
Source: The Joint Commission