

Disaster Prevention Requires Backup Systems

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The recent disaster in New Orleans may be a wake-up call for all physicians to establish some kind of emergency backup system for their businesses.

"Physicians don't always think of themselves as running a business, but they're going to think of it now," Rosemarie Nel-

son, a Syracuse, N.Y.-based consultant with the Medical Group Management Association, said in an interview.

Otolaryngologist Michael Ellis, M.D., is hoping that technology might have retained some of his records. His practice in Chalmette, La., south of New Orleans, is in an area flooded to the rooftops in the aftermath of Hurricane Katrina and the subsequent breakdown of New Orleans' levees.

"Like most physicians, I have billing

electronic records, but my office clinical records are paper. I assume all that—and our supplies and equipment—will be unsalvageable," he said in an interview shortly following the flood.

Dr. Ellis said that he had backups in place for his billing records, both hard copy and "off campus" (outside computer services), assuming that certain computers weren't damaged or backed up during the flood.

As Ms. Nelson noted, "there is just no

way to secure paper records. They're there or they're not. You're not going to copy and store them off-site."

However, a fully integrated electronic medical record might not have been completely safe for stricken medical communities, either.

Anne L. Shirley, a spokeswoman with the Louisiana State Medical Society, said an undetermined number of records have been destroyed.

Some electronic records weren't able to be accessed as most computer servers have been destroyed, Ms. Shirley said. The Louisiana State Board of Medical Examiners is located in a hard-hit flood area in New Orleans, and the society's Web site

RESPIRATORY SYNCYTIAL VIRUS (RSV): ARE WE DOING ALL WE CAN?

Enormous progress has been made in the fight against RSV, but there remains much more to do. Despite our best efforts, RSV still sends more than 125,000 infants to the hospital each year in the United States alone.¹ And RSV continues to be the leading cause of lower respiratory tract infections such as bronchiolitis and pneumonia among young children.² In fact, an analysis of recent trends has identified 372 annual deaths that are probably attributable to RSV in infants and children.³ RSV is also the leading viral cause of death in children <5 years of age.⁴ Part of the reason may be that many infants eligible for immunoprophylaxis continue to slip through the cracks.

Premature lungs and vulnerability to severe RSV

Premature infants are especially vulnerable to infection because their lungs are not fully developed. For instance, compared to full-term infants, 34 week gestational age (GA) infants have:

- Only 52% of the estimated lung volume⁵
- About 35% thicker alveoli walls⁵

This means that the lungs of 34 week GA infants have less volume to accommodate air and poor gas exchange.

At 1 year, prematurity continues to impact lung function. Results from a study conducted in premature (≤ 36 week GA) infants who had no history of respiratory disease during the neonatal period demonstrated:

- Greater than 50% reduction in airway function compared to the normal predicted value^{6,7}

This means even healthy-looking premature infants are susceptible to infection.

RSV can affect all premature infants regardless of degree of prematurity. A recent study of infants hospitalized with RSV compared 33–35 week GA infants with those ≤ 32 weeks' GA. Interestingly, the "older" infants (33–35 weeks' GA) had a(n)⁸:

- 24% longer hospital length of stay,
- 33% longer ICU length of stay, and
- 81% greater rate of intubation

Preventable adverse events and medical errors (such as procedural, preventive, and diagnostic errors) commonly occur when infants are hospitalized for bronchiolitis, especially in critically ill infants.⁹

RSV-related hospitalizations also result in significant stress for infants, their caregivers, and immediate family members.¹⁰ The impact of this stress, such as poorer overall health and higher levels of anxiety both for caregivers and for their children, can last up to 2 months.¹⁰ Assessment of at-risk infants* for RSV can help reduce these consequences.

The need for RSV prevention is critical

While a premature infant may appear to be healthy, their lung development is not complete. That is because premature infants' lungs continue to develop and mature, while underdeveloped lungs place all premature infants, even those who are near term, at risk. In fact, healthy-looking 33–35 week GA infants face severe consequences from RSV.⁶ This patient population is often overlooked for immunoprophylaxis during the RSV season.

Unfortunately, RSV is highly contagious. And because serious RSV infections are associated with both short- and long-term consequences, as well as with increased morbidity and mortality, it is important to consider all at-risk infants* for immunoprophylaxis.

*Infants with bronchopulmonary dysplasia or a history of premature birth (≤ 35 weeks' GA) and children with hemodynamically significant congenital heart disease.

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Follow FEMA's Flood-Proof Tips

Here are some general tips from the Federal Emergency Management Agency on flood and hurricane preparation for businesses:

- ▶ Ask your local emergency management office whether your facility is located in a flood plain. Find out the history of flooding in your area. Determine the elevation of your facility in relation to streams, rivers, and dams.
- ▶ Learn about community evacuation plans from your local emergency management office.
- ▶ Establish facility shutdown procedures. Make plans for assisting employees who may need transportation.
- ▶ Purchase a National Oceanic and Atmospheric Administration weather radio with a warning alarm tone and battery backup. Listen for flood watches and warnings.
- ▶ Get information about flood insurance from your insurance carrier. Regular property and casualty insurance does not cover flooding.

If a hurricane or other major weather event is being forecast, consider taking these actions ahead of time:

- ▶ Clear out areas with extensive glass frontage as much as possible. If you have shutters, use them; otherwise, use pre-cut plywood to board up doors and windows.
- ▶ Remove outdoor hanging signs.
- ▶ Bring inside or secure any objects that might become airborne and cause damage in strong winds.
- ▶ Store as much equipment as high as possible off the floor, especially goods that could be in short supply after the storm.
- ▶ Move equipment that cannot be stored away from glass and cover it with tarpaulins or heavy plastic.
- ▶ Place sandbags in spaces where water could enter.
- ▶ Remove papers from lower drawers of desks and file cabinets and place them in plastic bags or containers on top of the cabinets.

and database were inoperable, even from remote locations, Ms. Shirley said. "This, as you can imagine, poses a problem with license verification and credentialing for displaced physicians."

One way to solve backup problems such as these is to have electronic medical records stored in a secure, remote site by a vendor, Ms. Nelson said. "And, it does not have to be a vendor you bought your software from; there are tons of vendors out there providing remote access."

Such vendors also can offer Internet-based backups, which "add a whole new sense of security," she noted. "When something happens in an area or region, that [backup disk] you took home is as insecure as your records."

Even if they don't use an electronic medical record system (and only about 15% of doctors have them), physicians should consider storing their administrative records, such as financial and scheduling information, off-site, Ms. Nelson said.

"You need to think about using off-site backup for your financial applications, scheduling, patient list, and some receivables. You still have insurance receivables there, and you're going to need that cash inflow because you're going to have to buy new equipment. So securing your financial records is equally as important."

The patient list will be essential when you need to inform patients that you've set up your practice in a new location or will be reopening on a particular date, she added.

An advantage of backing up financial information is that it also includes some clinical information, Ms. Nelson said. "That's because you need to have a diag-

nosis code to bill the insurance company."

At press time, Dr. Ellis was able to communicate only by e-mail because all the phone prefixes in Louisiana and Mississippi were unreachable.

He could reach his practice associate in Birmingham via e-mail. "Two of my staff communicated that they are in upper Mississippi."

Mail was something he wasn't able to receive. "No one has said what is happening to it, or how we can contact insurers, Medicare, etc., to change our address. I don't know what patients are doing about getting their prescriptions filled since they can't reach doctors." ■



Canal Street is flooded a day after Hurricane Katrina blew through on Aug. 30, 2005, in New Orleans. Devastation is widespread after water rose 12 feet high in some areas.

Medical Schools Are Making Do

Medical schools affected by Hurricane Katrina and its aftermath scrambled to find alternate locations and resources.

At press time, most students from Tulane University in New Orleans were being housed 180 miles away at Jackson State University in Jackson, Miss.

"Senior administrative staff are in discussion with their counterparts at Houston-area medical schools about these schools assisting Tulane in continuing to provide medical education for Tulane students in all 4 years of medical education," the Association of American Medical Colleges reported. A similar plan was being developed for Tulane residents.

The Louisiana State University School of Medicine, New Orleans, will hold classes in Baton Rouge, Dean Larry Hollier, M.D., said in a statement. "We will be expanding our bed capacity at Earl K. Long Medical Center [in Baton Rouge] and at University Medical Center in Lafayette and reassigning our residency staff to those hospitals [and others]."

The University of South Alabama in Mobile reopened in September, the AAMC reported.

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¹IMS Dataview, May 2005.
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