



# City Health Information

Volume 33 (2014)

The New York City Department of Health and Mental Hygiene

No. 3; 21-28

## EMERGENCY PREPAREDNESS FOR HEALTH CARE PROVIDERS

- Make sure that your electronic health record (EHR) system can be accessed from a remote location that is unlikely to be affected by a local emergency.
- Use your EHR to identify patients who are chronically dependent on medications or medical devices and proactively speak with them about emergency planning.
- Establish an emergency plan for staffing, maintaining communications with staff and patients, and storing medicines and vaccines if clinic service is disrupted or electricity is lost.

Disasters such as 9/11, the 2003 Northeast blackout, and Hurricane Sandy demonstrated how important it is for medical providers to be prepared for emergencies, whether natural or man-made. During Hurricane Sandy, flooding and power outages forced clinics, doctors' offices, pharmacies, and other outpatient facilities to close or reduce services.<sup>1</sup> More than 500 health care sites were inundated by water, and 1,200 suffered power outages.<sup>1</sup> Other emergencies such as terrorist attacks—including bioterrorist attacks—radiation fallout, and pandemic influenza can affect clinic operations while increasing demand for medical services. These challenges will be difficult without an emergency preparedness plan.<sup>2,3</sup>

There are several things you can do ahead of time to minimize disruption to clinic and business operations and patient care during an emergency<sup>1,3</sup>:

- Make sure your electronic health record (EHR) system is accessible from an offsite location unlikely to be affected by a local emergency.
- Use your EHR to identify patients chronically dependent on medications and medical devices and discuss emergency plans with them.
- Establish an emergency plan for your practice.



### PREPARING THE PRACTICE

#### Use an EHR system

An EHR system can help you provide care during an emergency (**Box 1**<sup>1,3-8</sup>). EHRs can be backed up offsite, allowing easier access to medical information.<sup>1,4,9</sup> With some EHRs, complete patient records are available from any computer with an internet connection.<sup>3</sup> Ensure that you can access the system from a remote location that is unlikely to be affected by an emergency and that your vendor's servers are protected from flood risk. EHRs may also enable you to share patients' medical histories with providers who can remain open during the emergency<sup>9</sup> (see *During an Emergency*, page 24).



Credit: FEMA

**Patient health records were damaged by floodwaters during Hurricane Sandy.**

### BOX 1. BENEFITS OF ELECTRONIC HEALTH RECORD SYSTEMS

- EHRs help maintain continuity of care
  - Enable electronic prescribing (e-prescribing), allowing prescribing to continue during an emergency.
  - Help prevent permanent loss of data and allow for quick restoration of services after an emergency.<sup>1,4</sup>
  - Are less vulnerable to destruction by fire, water, mold, or other agents than paper charts.<sup>1,3</sup>
- EHRs improve patient care
  - Increase rates of antithrombotic therapy, blood pressure control, HbA1c testing, and smoking cessation intervention.<sup>5</sup>
  - Significantly reduce error rates.<sup>6,7</sup>
- Physicians surveyed reported that EHRs<sup>7</sup>
  - Enhanced patient care overall (78%).
  - Helped them access a patient's chart remotely (81%).
  - Alerted them to a potential medication error (65%) and critical lab values (62%).
- EHRs make it easier for you to have a functional back-up system, as required under HIPAA<sup>8</sup> (**Resources—US Department of Health and Human Services**).

Visit the Primary Care Information Project at [www.nyc.gov/html/doh/html/hcp/pcip.shtml](http://www.nyc.gov/html/doh/html/hcp/pcip.shtml) to learn about adopting and using EHRs.

If your system is on a local server that does not allow remote access, ensure that your server environment can be replicated in a safe area. Contact your vendor for more information.<sup>9</sup>

It can cost between \$15,000 and \$70,000 per provider to implement an EHR system, depending on the type of system installed, need for workflow redesign, and staff time spent in training. You may be eligible for federal funds through the EHR Incentive Program; contact the Primary Care Information Project's NYC REACH program at (347) 396-4888 or e-mail [pcip@health.nyc.gov](mailto:pcip@health.nyc.gov) for information.

### Identify patients with special medical needs

Patients who are chronically dependent on medications or medical devices are in particular danger during an emergency.<sup>10-12</sup> Query your EHR to identify

### BOX 2. WHAT TO TELL PATIENTS ABOUT PREPARING FOR AN EMERGENCY<sup>11-14</sup>

- Make a family emergency plan. There are online resources you can consult for guidance (**Resources—General Preparedness**).
- Make a list of possible contacts or destinations to consider in case of an evacuation (eg, family, friends, or colleagues).
- Keep a 7- to 14-day supply of medication.
- Give copies of medical information to trusted family members or support agencies.
- Keep the following in a waterproof container such as a plastic bag and give a copy to a relative or friend who doesn't live with you:
  - Providers' contact information
  - Copy of insurance card(s)
  - List of medical history and medical conditions
  - List of medications, dosages, and medication allergies
  - Emergency contact information of close friend/relative
- Keep medical equipment in an easy-to-reach place.
- Fill prescriptions at a large pharmacy with a central electronic database.
- Keep a portable (waterproof hard copy, CD, DVD, jump drive, and/or cellphone) list of prescriptions and dosages or keep a picture on your cellphone of your prescription bottles or packages showing the labels.

For more information, see **Resources—5 Tips for Prescription Preparedness**.

such patients and proactively educate them about emergency preparedness (**Box 2**<sup>11-14</sup>; **Resources—NYC OEM: Ready New York: My Emergency Plan**). Help patients find an alternate site for care, especially those on methadone, dialysis, or those with other chronic diseases.<sup>12</sup>

### Back up essential documents

Back up office forms, policies, payroll information, credentials, office inventory (for insurance purposes), and employee contact information.<sup>3,15</sup>

Keep paper and electronic copies offsite and also use a portable storage device for redundancy of the electronic documents.<sup>3</sup> Test electronic backups quarterly to make sure they are accurate and complete.

### Make sure you're informed of developing emergencies

Sign up for e-mail alerts from the New York City Health Department at [www.nyc.gov/health/nycmed](http://www.nyc.gov/health/nycmed) and the NYC Office of Emergency Management at [www.nyc.gov/notifynyc](http://www.nyc.gov/notifynyc) (**Box 3**).



## CREATE AN EMERGENCY PREPAREDNESS PLAN

Ask your staff for input and consult online resources (**Resources—Preparedness for Providers**) for guidance on developing an effective and practical written plan<sup>3,11</sup> (**Box 4**<sup>3,11,12,14-18</sup>). If feasible, consult with an emergency preparedness expert.

A critical aspect of your preparedness plan is maintaining communications with staff. Ensure that employee contact information is complete and current,

### BOX 3. SIGN UP FOR THE NYC HEALTH ALERT NETWORK AND NOTIFY NYC

- The NYC Health Department's Health Alert Network (HAN) delivers up-to-date information on current public health emergencies directly to your e-mail inbox. HAN subscribers also have access to an online document library on public health topics and an online community to exchange information and ideas with colleagues.

**Register for the HAN at** [www.nyc.gov/health/nycmed](http://www.nyc.gov/health/nycmed).

If you have problems accessing NYC MED, please e-mail [nycmed@health.nyc.gov](mailto:nycmed@health.nyc.gov) or call 1-888-NYC MED 9.

- Notify NYC is the City of New York's official source for information about emergency events and important City services.

**Register for Notify NYC at** [www.nyc.gov/notifynyc](http://www.nyc.gov/notifynyc).

### BOX 4. EMERGENCY PLAN BASICS FOR HEALTH CARE PROVIDERS

- List the roles each staff member will play in an emergency.<sup>11,16,17</sup>
- Create and test telephone and e-mail trees.<sup>14,15</sup>
- Detail how you plan to communicate with patients, particularly those with daily medication needs.<sup>3,15,16,18</sup>
- Describe how you will conduct your practice in case your electronic health record system is inoperable.<sup>3,11</sup>
- List alternate care sites where patients should go in case your practice is closed.<sup>3,11,12,17</sup>
- Create a chart of stored vaccines and other essential medical materials, including their location.<sup>3,11,17</sup>
- List the location of essential documents, such as office forms, policies, payroll information, credentials, office inventory (for insurance purposes), and employee contact information, and their back-ups.<sup>11</sup>
- Detail your office's supplies (eg, water, nonperishable food, paper products), including their location, and back-up power sources.<sup>3,11,16,17</sup>
- Review and update information twice a year.

and establish and test a staff phone tree. Practice other aspects of your emergency plan with staff through tabletop discussions or formal drills.<sup>2,11</sup> Encourage staff to develop their own personal preparedness plans<sup>3</sup> (**Resources—General Preparedness**).

If you keep large amounts of vaccine on hand, you'll need a plan to keep the inventory safe (**Box 5**<sup>19</sup>).

### BOX 5. IF YOU KEEP A LARGE VACCINE STOCK<sup>19</sup>

- Develop a written vaccine storage plan that includes emergency procedures for
  - ordering vaccines,
  - managing vaccine inventory,
  - storing vaccines and monitoring storage conditions,
  - protecting vaccine inventories, eg,
    - buying a portable generator and keeping extra fuel on hand,<sup>a</sup>
    - arranging 24-hour access to an alternate site, such as a community hospital, where vaccines and diluents can be safely stored.
- Make the vaccine storage plan accessible to appropriate staff and keep a copy near the vaccine storage unit(s).
- Designate primary and alternate vaccine coordinators.
- Review and update the plans regularly.

See **Resources—CDC Vaccine Toolkit** for detailed suggestions, including equipment considerations for storage units and thermometers.

<sup>a</sup>For information on generator safety, see <http://emergency.cdc.gov/disasters/elegenerators.asp>.

### Extra supplies

Keep a battery-powered nebulizer, albuterol vials, and metered-dose inhalers with spacers available for patients who lose power or equipment.<sup>3</sup>

In an emergency, staff may have to work extended hours when outside supplies are limited. Make a list of provisions that you can gather in advance, including 3-day supplies of water (1 gallon per person per day<sup>11</sup>), nonperishable food, and paper products.<sup>3</sup> Store food in a cool, dry place; canned food and dry mixes will keep for about 2 years.<sup>20</sup>

For more items to store, see [www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Documents/PedPreparednessChecklist1b.pdf](http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Documents/PedPreparednessChecklist1b.pdf).

### Telephone access

With your staff, review the possible methods for communicating with patients during an emergency—telephone, outgoing voicemail message, text messages, and e-mail.<sup>3</sup> Voicemail systems do not require a physical “real-world” location, and can be useful for posting announcements when other infrastructure has been damaged or destroyed. Conduct practice drills, using staff phone trees or private e-mails to communicate,<sup>3</sup> and update the plan once a year.

During and after any emergency, patients' needs can sometimes be addressed over the phone (eg, prescription refills and maintenance of chronic conditions).<sup>21</sup> Use a back-up phone service to offer a basic level of care during and shortly after an emergency. Ensure that your phone company can redirect calls to a remote back-up telephone line.<sup>21</sup> Obtain alternate charging technology for cellphones, such as a portable D-cell battery charger or solar charger. If possible, communicate by text messaging, which often works even when voice circuits are down.<sup>3</sup>

See **Resources—Best Practices Guide:**

**Telecommunications Resiliency** for detailed guidance on maintaining telephone communications during an emergency.

### DURING AN EMERGENCY

During an emergency, check for information from Notify NYC and the NYC Health Alerts and follow the guidance given (**Box 3**).

You may get requests for patient information during the emergency. Providers and health plans covered by the HIPAA Privacy Rule may share patient information<sup>8,22</sup>

- as necessary to provide treatment or coordinate care for the patient,
- to identify, locate, and notify family members, guardians, or anyone else responsible for the individual's care regarding the individual's location, general condition, or death,
- as necessary to prevent or lessen a serious and imminent threat to the health and safety of a person or the public (consistent with applicable law and the provider's standards of ethical conduct),

- to respond to inquiries about whether the individual is at a facility, their location in the facility, and general condition.

For detailed information on disclosure rules related to emergency preparedness, see **Resources—US Department of Health and Human Services**.

### SUSTAINED PUBLIC HEALTH EMERGENCIES

Sustained public health emergencies such as pandemic influenza will create a surge in demand for care.<sup>15,16</sup> Make a contingency plan to address staff absences (**Box 6**<sup>15,23</sup>), which can reach 30% during the peak of a pandemic, and cross-train administrative staff to support clinical activities.<sup>15</sup> If possible, recruit temporary personnel or volunteers, eg, retired physicians, nurses, or allied health professionals, to meet expected increases in patient volume.<sup>15</sup>

#### BOX 6. EXPANDING SURGE CAPACITY<sup>15,23</sup>

In a sustained public health emergency:

- Increase hours of operation and stagger shifts.
- Coordinate schedules with other practices based on prearranged agreements.
- Cancel nonessential visits (eg, annual physicals and routine check-ups). If possible, conduct routine follow-up by telephone and e-mail.
- Conduct patient triage by telephone and e-mail, limiting office visits to patients with influenza or other acute conditions.

For pandemic influenza, other ways to prepare your practice include

- plans for separate blocks of time designated for noninfluenza- and influenza-related patient care,
- plans to keep possible flu patients separated from non-flu patients in your waiting areas,
- waiting areas stocked with tissues, bottles of hand sanitizer, and cough etiquette signs (**Resources—Preparedness for Providers**).

See **Resources—City Health Information: Avian and Pandemic Influenza Preparedness for Primary Care Providers** for more information.

Plan to stockpile essential medical materials for at least 72 hours (eg, NIOSH-approved N95 respirators and surgical masks, eye protection/face shields, gloves, gowns, soap, hand hygiene products, tissues, cleaning supplies, critical medications, and other

essential consumable medical supplies).<sup>15</sup> Keep a list of emergency contact numbers and account information for all key suppliers and referral hospitals and have contingency agreements in place with more than one vendor to ensure adequate supplies.<sup>15</sup>

### CONSIDER JOINING THE MEDICAL RESERVE CORPS

Medical professionals who wish to serve the wider community during an emergency can volunteer for the NYC Medical Reserve Corps (MRC), a multidisciplinary group of health professionals who can be called to serve during a public health emergency (**Box 7**). If you have an urgent need for additional clinicians during an emergency, MRC may be able to assist, depending on volunteer availability. Contact MRC at [healthmrc@health.nyc.gov](mailto:healthmrc@health.nyc.gov) or 347-723-1696 to request help.

#### BOX 7. NYC MEDICAL RESERVE CORPS (MRC) VOLUNTEERS

- Help distribute antibiotics and vaccine to New Yorkers during health emergencies requiring mass prophylaxis.
- May also assist with medical surge capacity (eg, during a pandemic influenza outbreak) or mass sheltering operations (eg, during a coastal storm).
- When participating in MRC activities, receive indemnification against liability through General Municipal Law section 50-K.

Visit the New York City Medical Reserve Corps at [www.nyc.gov/html/doh/html/em/emergency-mrc.shtml](http://www.nyc.gov/html/doh/html/em/emergency-mrc.shtml) to register as a volunteer.

### SUMMARY

Take action to prepare your practice for both natural and man-made emergencies so that you can continue to serve the patients who depend on your care. Make sure that your EHR is accessible from a site unlikely to be affected by an emergency. Use your EHR to identify patients who are chronically dependent on medications or medical devices and discuss emergency plans with them. Establish an emergency plan for staffing, maintaining communications with staff and patients, and storing medicines and vaccines. ♦

## RESOURCES

### New York City Department of Health and Mental Hygiene

- *City Health Information* archives: [www.nyc.gov/html/doh/html/data/chi1.shtml](http://www.nyc.gov/html/doh/html/data/chi1.shtml)
- *Implementing Panel Management to Improve Patient Care*
- *Avian and Pandemic Influenza Preparedness for Primary Care Providers*
- *Diagnosing and Managing the Mental Health Needs of Adults Exposed to Disaster*
- Primary Care Information Project (PCIP): [www.nyc.gov/html/doh/html/hcp/pcip.shtml](http://www.nyc.gov/html/doh/html/hcp/pcip.shtml)
- Best Practices Guide: Electronic Health Records: [www.nycreach.org/resources/SIRR%20-%20EHR%20Guidebook.pdf](http://www.nycreach.org/resources/SIRR%20-%20EHR%20Guidebook.pdf)
- Best Practices Guide: Telecommunications Resiliency: [www.nycreach.org/resources/SIRR%20-%20Telecommunications%20Guidebook.pdf](http://www.nycreach.org/resources/SIRR%20-%20Telecommunications%20Guidebook.pdf)
- 5 Tips for Prescription Preparedness: [www.nyc.gov/html/dfta/downloads/pdf/prescription\\_prep\\_tips.pdf](http://www.nyc.gov/html/dfta/downloads/pdf/prescription_prep_tips.pdf)
- New York City Medical Reserve Corps: [www.nyc.gov/html/doh/html/em/emergency-mrc.shtml](http://www.nyc.gov/html/doh/html/em/emergency-mrc.shtml)

### Preparedness for Providers

- Centers for Disease Control and Prevention (CDC). Clinician Outreach and Communication Activity (COCA): [www.bt.cdc.gov/coca/](http://www.bt.cdc.gov/coca/)  
Current and reliable information available on emerging health threats; e-mail updates
- Centers for Disease Control and Prevention. Vaccine Storage and Handling Toolkit: [www.cdc.gov/vaccines/recs/storage/toolkit/](http://www.cdc.gov/vaccines/recs/storage/toolkit/)
- Centers for Disease Control and Prevention. Cover Your Cough: [www.cdc.gov/flu/pdf/protect/cdc\\_cough.pdf](http://www.cdc.gov/flu/pdf/protect/cdc_cough.pdf)
- Greater New York Hospital Association Emergency Preparedness Plans and Tools (GNYHA members): <http://gnyha.org/31/default.aspx>
- American Academy of Pediatrics. Preparedness Checklist for Pediatric Practices: [www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Documents/PedPreparednessChecklist1b.pdf](http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Children-and-Disasters/Documents/PedPreparednessChecklist1b.pdf)

- American College of Physicians. Bioterrorism and Disaster Preparedness: [www.acponline.org/clinical\\_information/resources/bioterrorism/](http://www.acponline.org/clinical_information/resources/bioterrorism/)
- American Academy of Family Physicians. Disaster Relief/Disaster Preparedness: [www.aafp.org/about/make-a-difference/disasters.html](http://www.aafp.org/about/make-a-difference/disasters.html)
- Kentucky Medical Association. Model Disaster Plan for a Physician Practice: [www.kyma.org/uploads/file/Patient\\_Safety/Physicians/Disaster\\_Plan.pdf](http://www.kyma.org/uploads/file/Patient_Safety/Physicians/Disaster_Plan.pdf)
- US Department of Health and Human Services. Can health care information be shared in a severe disaster? [www.hhs.gov/ocr/privacy/hipaa/faq/disclosures\\_in\\_emergency\\_situations/960.html](http://www.hhs.gov/ocr/privacy/hipaa/faq/disclosures_in_emergency_situations/960.html)
- Primary Care Emergency Preparedness Network. Primary Care Center Emergency Management Plan Template: [www.nyc.gov/html/doh/downloads/pdf/em/pcee-temp.pdf](http://www.nyc.gov/html/doh/downloads/pdf/em/pcee-temp.pdf)

### Emergency Alerts

- Notify NYC: [www.nyc.gov/notifynyc](http://www.nyc.gov/notifynyc)
- New York City Advance Warning System: [www.advancewarningsystemnyc.org](http://www.advancewarningsystemnyc.org)

### General Preparedness

- New York City Office of Emergency Management. Get Prepared: [www.nyc.gov/html/oem/html/get\\_prepared/prepared.shtml](http://www.nyc.gov/html/oem/html/get_prepared/prepared.shtml)
- New York City Office of Emergency Management. Ready New York: My Emergency Plan (information for people with special needs): [www.nyc.gov/html/oem/html/ready/myemergencyplan\\_guide.shtml](http://www.nyc.gov/html/oem/html/ready/myemergencyplan_guide.shtml)  
Available in PDF in 7 languages and as an audio file
- California Volunteers. 10 Ways We Prepare for Disasters: <http://californiavolunteers.org/familyplan/pdf/10ways.pdf>
- American Academy of Pediatrics. Family Readiness Kit: Preparing to Handle Disasters: [www2.aap.org/family/frk/aapfrkfull.pdf](http://www2.aap.org/family/frk/aapfrkfull.pdf)
- Federal Emergency Management Agency. Ready Campaign materials: [www.ready.gov](http://www.ready.gov)
- American Red Cross. Plan and Prepare: [www.redcross.org/prepare](http://www.redcross.org/prepare)
- New York City Fire Department. Generator safety: [www.nyc.gov/html/fdny/html/events/2012/110112c.shtml](http://www.nyc.gov/html/fdny/html/events/2012/110112c.shtml)

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Suggested citation: Mandel-Ricci J, Pruitt D, Young R, Singer J. Emergency preparedness for health care providers. *City Health Information*. 2014;33(3):21-28.