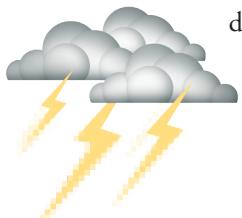


PRACTICE PEARLS

Dealing with stormy EHR "clouds"

Editor's note: As more practices move to electronic health record (EHR) systems, many of which store patient information in off-site computer servers (sometimes called "the cloud"), physicians are dealing with or preparing for instances when technology issues make this data temporarily unavailable. Outages can affect patient care if physicians don't have timely access to medication lists, lab results, or other patient history, and can even interfere with scheduling.

FPM asked physicians how they make sure breakdowns



don't doom their productivity for hours or days. Here is a collection of their responses.

Throughout the day, a computer in our offices creates a local backup file for each patient who has an active encounter in the hospital or has a scheduled appointment in our clinics. If the system goes down or we lose connectivity, we log into this machine to print or look up historical information for a patient being seen.

This approach, designed for the acute care setting, works in the ambulatory clinics but not as well because there are more walk-ins and last-minute appointments, for which records are unavailable if the system crashes. We then resort to a paper-based process, like what we had before the computer. We use that

paper copy to key in or scan critical data to document the visit when the system comes up.

David Voran, MD
Kansas City, Mo.

We print chart summaries for the next day's scheduled patients before going home each night, just in case we need to use them the following day. Each is a one-pager that lists the patient's diagnoses, medications, allergies, most recent vital signs, and office visits. We also include a patient information update sheet, which we can use for medication reconciliation and monitoring health maintenance information. If there is a breakdown, we have a printed routing slip, which we attach to our chart summary and can use to recreate the visit once the system is back up. We also break out the old prescription pads and use WordPad, Dragon speech-recognition software, and a copy of our old encounter form to track charges. We also print the appointment schedule at the end of each day, so we would not be making appointments blindly if there were an outage.

Tripp Bradd, MD
Front Royal, Va.

Overnight our server saves a full backup, which is then encrypted and copied to a USB drive. We actually rotate five USB drives – coinciding with a day of the week – that contain a total of 25 backup copies spanning the last six months. We check the size of each backup to make sure it increases

each time by a reasonably predictable amount. Without some type of "spot check," it's possible for automated backups to stop without warning. Having multiple copies on multiple devices also reduces the problems created if files become corrupted or hardware fails. Once a year, our EHR vendor verifies that the backup files are recoverable.

If we were to lose either the server, the network, or building power, we have information for the next 10 days of appointments in an encrypted file on our emergency laptop computer in a format that is readable and printable. (This laptop is on an uninterruptible power supply that extends its run time to 12 hours.) With that information, the office could function reasonably well while repairs were being made.

Nancy Neighbors, MD
Huntsville, Ala.

Our "Internet outage backup plan" consists of five portable Wi-Fi hotspots, each of which can support up to eight devices, and \$8 USB Wi-Fi adapters stuck into our 20 or so desktop computers so they can access the cellular network.

The biggest limitation is the inability to use printers on the local network while on Wi-Fi. I have considered getting some cloud-ready printers but worry about HIPAA requirements.

We have a pay-per-gigabit cellular data plan with no monthly contract, so we incur no additional costs until we need to activate the backup plan. While on the backup plan, we typically burn through about 500 megabytes of data a day – which costs us about \$5. Because we can have multiple hotspots with our data plan, the administration is easy.

Andrew Schechtman, MD
San Jose, Calif.

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