Cybersecurity in Today's Healthcare: A Review From Newberry Hospital

Presented by:
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Disclosure Statement

- I, Corey Bishop, am employed by Newberry Hospital. I have no financial or contractual conflicts of interests with any entity discussed in this presentation.

Why Does This Matter?

- In 2021, 686 2021 healthcare data breaches, 44,993,618 healthcare records have been exposed or stolen. That increased to 707 in 2022.(HIPPA Journal; Largest Healthcare Data Breaches of 2021 (hipaajournal.com))
- The average cost to a facility for a breach is 9.23 million dollars.
- The most common entry method is phishing scams. (Up to 91%)
- The average downtime for a facility is 22 days.

CO Hospital Suffers Email Data Breach, 52K Impacted

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Michigan Medicine data breach may affect health information of nearly 3,000 patients

Updated: Mar. 03, 2022, 8:02 p.m.

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AHA: Russia's Invasion of Ukraine Could Lead to Healthcare Cyberattacks

February 24, 2022

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- ***Ransomware attack affects 3.3 million patients in California***

-Becker's Health IT

Updated: Feb. 10th, 2023

- "…breach included names, SSN, diagnoses, treatments, lab results, and prescriptions."

- ***Devicemakers look to secure their products amid wave of attacks***

-Becker's Health IT

Updated: Feb. 13th, 2023

- "A survey of 500 healthcare executives…found 56% experienced a cyberattack targeting an internet-connected device over the past 24 months."

Let’s Drop Some Knowledge…

- Ryuk accounted for 3 of the 10 largest ransom payouts in 2020. ($5.3 mil, $9.9 mil, $12.2mil)
- Ryuk, meaning “Gift from God” in Japanese, is downloaded remotely as DaaS (Download as a Service) and can be used as a RaaS (Ransomware as a Service).

More Facts…

- Ryuk is generally thought to be run out of Russia by a threat actor group.
- In case you didn’t know…we aren’t exactly getting Christmas cards from Russia’s government right now…

ABC News Videos

Russia warns that a WWIII 'would involve nuclear weapons'

Sun, March 6, 2022, 5:15 AM

It Won’t Happen To Us…

- On February 21st, 2021@ 0200 , Newberry Hospital was hit with Ryuk ransomware.
- IT was onsite and locked down all systems by 0315.
- 0900-All admin was notified and in house as well as EM and briefed on situation. (First time told possible ransom)
- 1205-All systems encrypted. AON, AIG, Stroz, FBI, and local police all aware and techs enroute from AON and Stroz.


I DON'T EVEN KNOW WHAT
HAPPENED...

It Won’t Happen To Us…

- Monday Feb 22nd Briefing:

All computers, phones, EMR, and systems are down or compromised. This also includes ANYTHING tied to the network ie: payroll, billing, forms, credit card machines, tube systems, ALL radiology, scheduling, Medical Records, MAR’s, HUGS system, and more.

More Bad News…

- The facility was placed on total diversion.
- EMS was bolstered due to imaging patients being taken to other facilities.

I Didn’t Think About That…

- -For insurance and reimbursement, ALL costs must be reported. This includes employee labor, fuel, contracted services, lost revenue, etc.

Let's Think Positive

- Our EMR was restored on March 1st. All workstations were back up also.
- All systems had been backed up on Feb. 20th at 0600.
- Moved immediately to a cloud-based vendor for HR/payroll.

Remember the Good Ol’ Days?

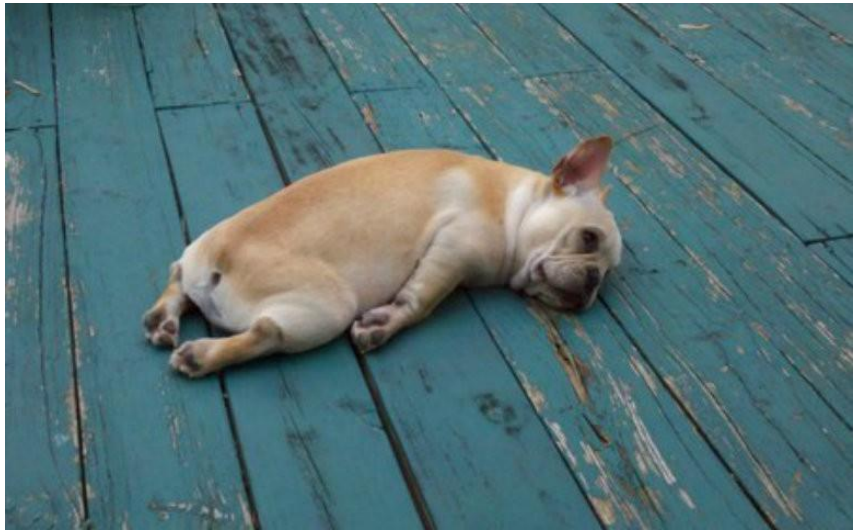
Gotcha!!

- On March 3rd, through the efforts of SLED, our IT, and the FBI, we were finally able to determine the access was made through a 3rd party vendor access that still used Windows 7 for their system.

Finally!!!

- Thursday, March 18th at 1154.

Memo sent to providers and staff to lift diversion and resume normal operations!



That’s What Insurance Is For

- Our facility cyber premium increased 6x and our deductible increased over 10x.

- Also of note, when put out for bid, only one company even offered to insure us.

What Did We Learn?

- Lots of lessons learned the hard way.
- We weren’t as prepared as we thought but we were lucky.

Lessons Learned

- Downtime forms…better check them! Are they current?
- Is your COOP ready? Have you drilled it/executed it?
- Can you restrict information leaks?
    - PIO will be your facility's best friend!

Lessons Learned

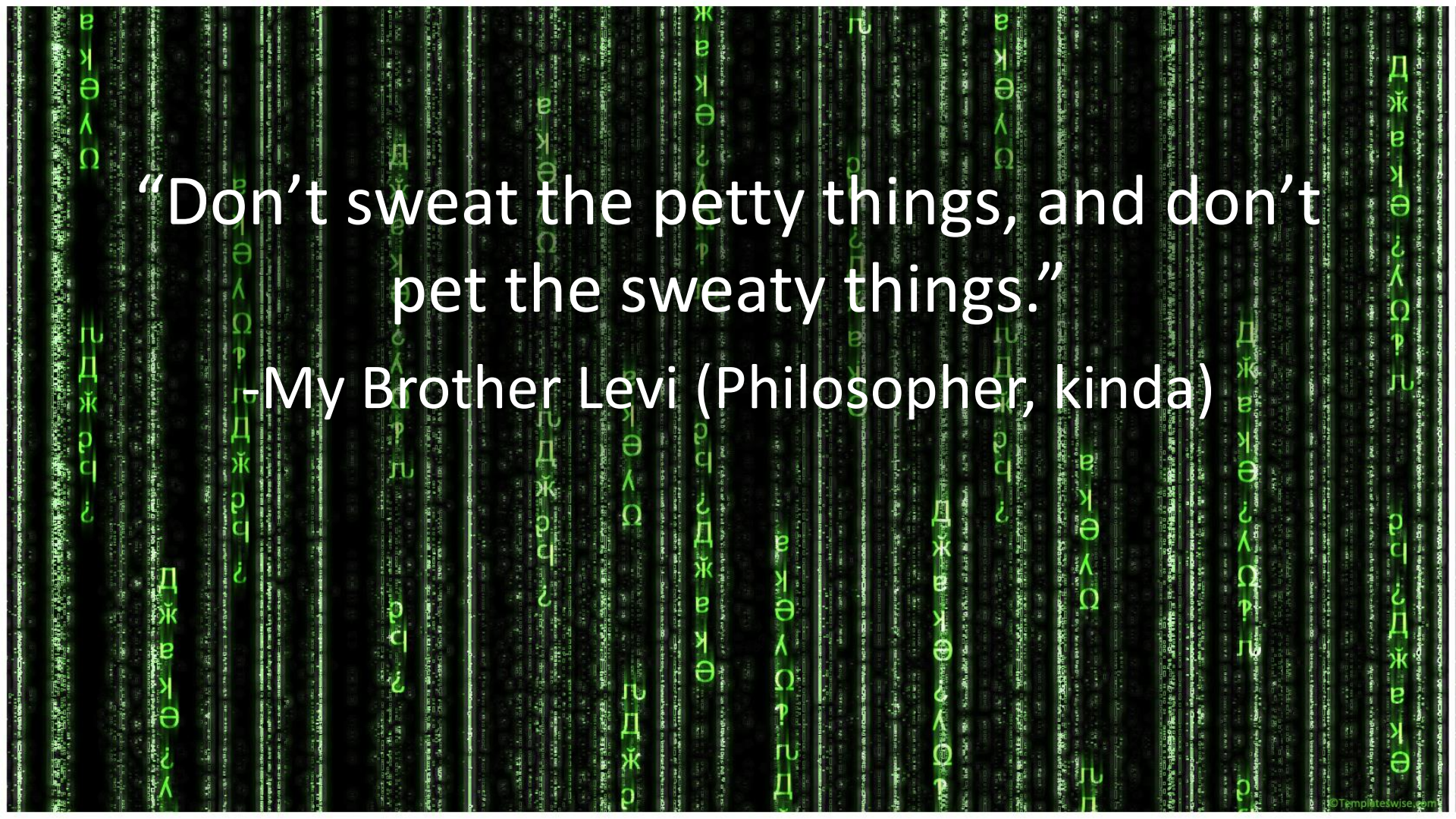
- What is your facility doing to mitigate and educate staff?
- Redundant communication systems. Do you test them? Are they accurate? Are your key players trained on them regularly?

Lessons Learned

- Network Security
  - Changed vendors, eliminated 3/4ths of our remote access use. Multi-factor authentication in ALL areas.
- Outside Partner Relationships
- Business Recovery

Lessons Learned

- Vendor security reviews upon beginning business and then annually.
- Vastly increased server capacity both to the regular network and offline.


“Don’t sweat the petty things, and don’t pet the sweaty things.”
-My Brother Levi (Philosopher, kinda)

“If you fail to plan, then you are planning to fail.”

-Benjamin Franklin

The Most Important Thing

- AT NO POINT WAS A SINGLE PATIENT'S CONFIDENTIAL INFORMATION COMPROMISED!!!

Thank you!!!!

Questions??

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