

It's You and Your Practice vs.
Hackers using AI – Who is Going to Win?
Let me help you Defend Yourself.



Steve McEvoy
February 29th, 2024



Hey Steve – where are all the graphics?

I can't be 100% certain that all the graphics used in my presentation are royalty free. The only way to stave them off for certain is to remove all the graphics.

My apologies that this will be less visually interesting, but if you were at my presentation, it will still make sense and you can use it for reference. Thanks for coming!

Fun!

Entertaining!

The Internet is _____

Unruly

Scary

Dangerous

Annoying
Confusing
(Cyber) Security is _____

Complicated
Difficult
Expensive

How can you be 100%
safe from Cyber crime
with little effort?

The Internet has some
scary s**t going on

This is a self defense course

What Cyber Incident in the last week is affecting your Practice?

TECH

UnitedHealth subsidiary Change Healthcare down for a fourth day following cyberattack

PUBLISHED SAT, FEB 24 2024 4:24 PM EST
 UPDATED SAT, FEB 24 2024 4:31 PM EST

Ashley Capoot
 @IN/ASHLEY-CAPOOT-02496B173/

KEY POINTS

- Change Healthcare's systems are down for the fourth day in a row after parent company UnitedHealth Group disclosed a suspected cyberattack on Wednesday.
- UnitedHealth said it identified a "suspected nation-state-associated" actor behind the attack, according to a filing with the U.S. Securities and Exchange Commission on Thursday.
- In an update at around 2 p.m. ET Saturday, Change Healthcare said the disruption is expected to continue "at least" through the day.

The American Hospital Association [released a statement](#) Thursday urging health-care organizations to disconnect from Optum until it is deemed safe to reconnect. The AHA said it has been talking with the Department of Health and Human Services, the FBI and the Cybersecurity and Infrastructure Security Agency about the attack, according to the statement.



Ransomware gang claims they stole 6TB of Change Healthcare data

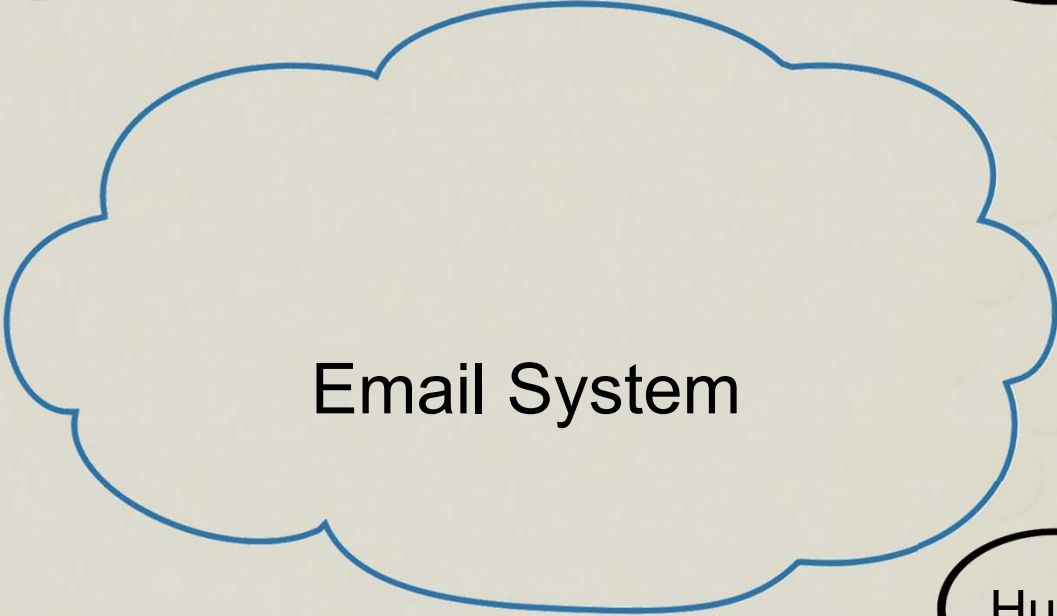
7 hours ago

Let me tell you a story ...

Please
Pay

OK

Manager



Finance

Huh?

Please
Pay

OK

Hacker

Email System

Finance

Altered

Huh?

Technology Fails

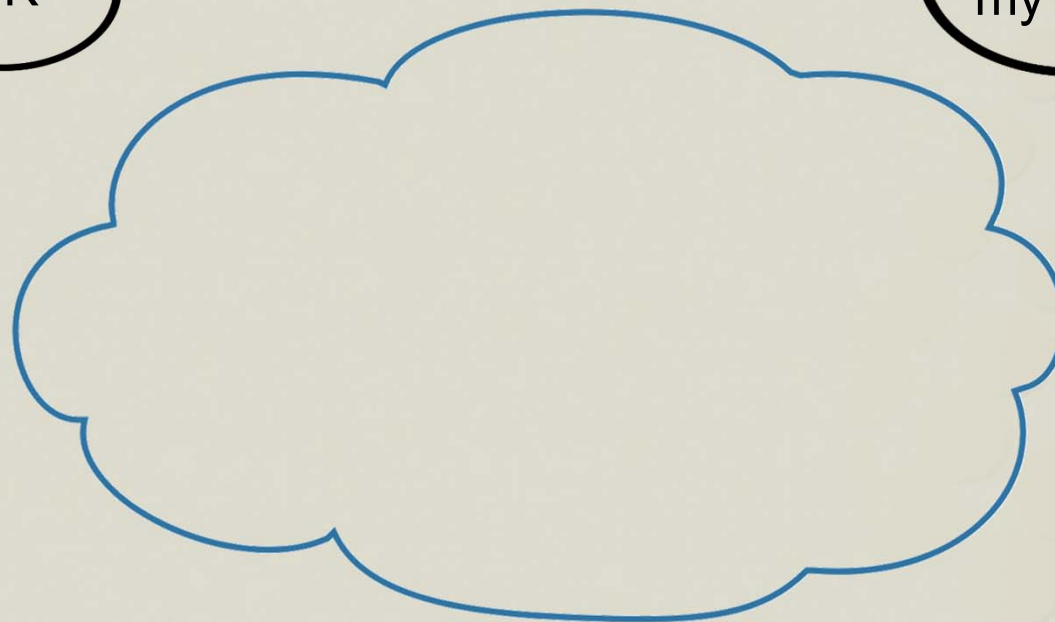
- Manager Reused Password
- MFA Not Enabled for email accounts
- Geo-Blocking not enabled
 - (Hacker was in Sweden)

Size of the Haul?

About \$1,000

Manager

OK



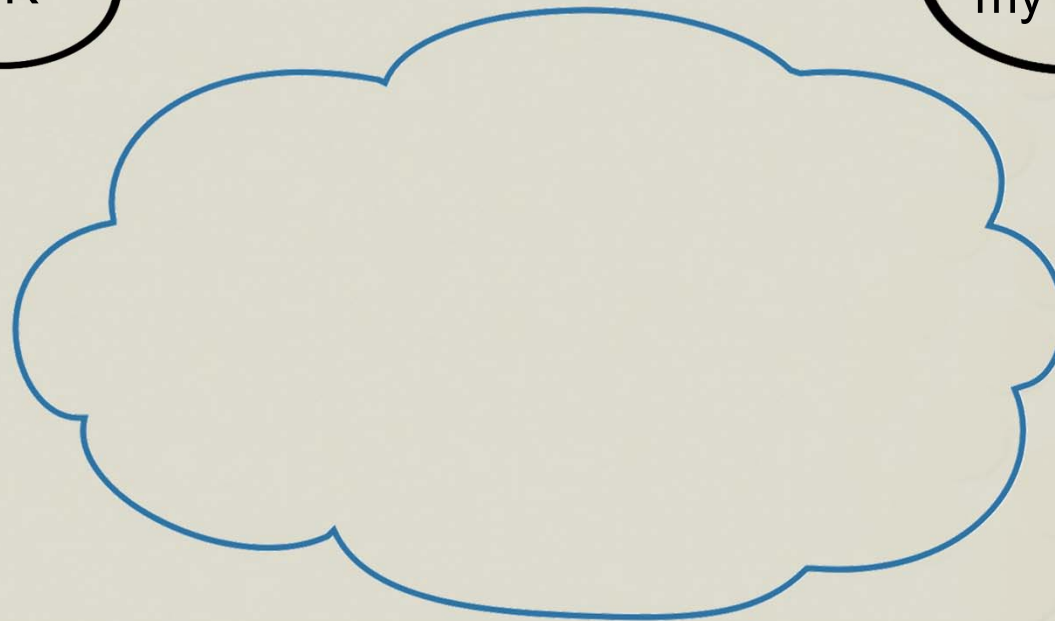
Email System

Change my ACH

Clinic Assistant

Manager

OK



Email System

Change my ACH

Hacker

Technology Fails

- Clinic User Reused Password
- MFA Not Enabled for email accounts

Size of the Haul?

About \$5,000

Just one more ...

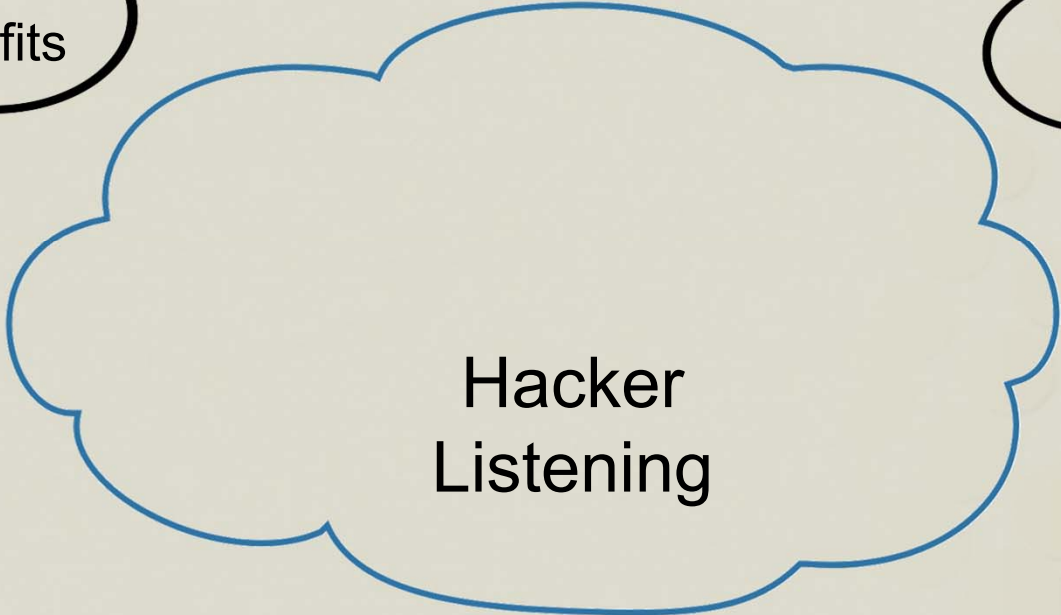
Secret Service

Size of the Haul?

About \$800,000!

Transfer Profits

OK



CFO

Controller

Email System

CFO

Transfer Profits

Hacker
Intercepts
and
Changes
Email

Transfer Profits to New ACH

OK

Controller

Email System

Solution for All Three Events?

- No New Technology Required!
- Free!
- Almost no Training Required
- Can be implemented TODAY!

Solution for All Three Events

Telephone

Financial Change Policy

- Any change in a payment process needs verbal confirmation with the requestor
 - New vendor
 - New account
 - Change of money flow of any kind
- Independent confirmation by the person processing the change
 - You call them to verify

Artificial Intelligence (AI)

- Google CEO quoted as saying that “AI is the most profound technology humanity is working on. More profound than fire, electricity, or anything that we have done in the past”
- So big that even Googles CEO is coming out and saying government regulation is needed, and fast.

How can AI help an Orthodontic Practice?

Augmenting an Orthodontic Practice with AI

- Orthodontics requires extensive knowledge and expertise, which can be time-consuming and overwhelming for Orthodontists.
- **ChatGPT**, an AI language model, can help augment some of the work in an Orthodontics Practice.
- In this presentation, we will explore how an orthodontist might use **ChatGPT** to enhance their Practice.

Understanding ChatGPT

- ChatGPT is a large language model trained using natural language processing techniques that can understand and generate human-like responses to a wide range of questions and tasks



Leveraging ChatGPT in an Orthodontics Practice

- Orthodontists can use ChatGPT to assist with:
 - Patient communication
 - Marketing materials and communications
 - Staff training and much more
- The use of ChatGPT can help orthodontists save time and improve the quality of care they provide to their patients.



Who Wrote That?



How can we use this at the Practice?



Web Content



Team Training Tools



Security's Weakest Link?



Phishing

Old Nigerian Prince phishing attacks are still out there, but most of us have gotten wise

Spear Phishing



Social Engineering

- Best Feature of a Smart Phone?
- What do we do with them?
- What can a hacker learn from a photo?

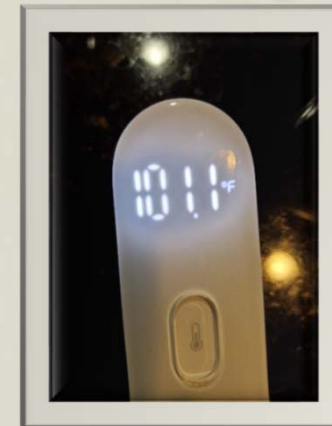


Meta Data



What do you know about me?

- White
- Male
- 50's ish
- Probably Married
- Not Broke
- Exactly where I live
- Who my neighbors are
- ... and I might be an ideal target for a hack



What could I do with that Info?

- As a Stalker?
- Contact customer service pretending to be you to reset a password
 - Memes - Security questions
 - Photo – Address
- Make a super convincing Phishing email
 - Since they know so much about you

Send	From ▾	GuyNaughty@gmail.com
	To...	Steven McEvoy;
	Cc...	
Subject		I need your Approval to Paint My House the Same color as yours

Hi Steve,

I hope you don't mind. I live at 21 Bixby Court, just on the other side of your street. I tried stopping by to touch base in person, but no one was home.

I was talking to Chris Holmes our common neighbor and he gave me your email (I hope you don't mind)

I am looking to repaint my house and my wife and I are going to use the same colors of your house (love the sand and terracotta colors)!

The HOA needs us to get an approval from our surrounding neighbors in order to give us the green light.

If you have a quick minute could you please have a look at my application to the HOA and sign it online for me? Hopefully this isn't too big a hassle.

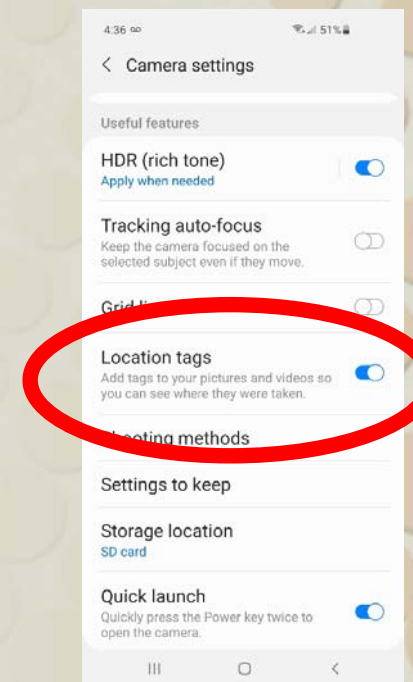
Here is a link to the PDF. [Bad link to install Ransomware](#)

BTW – say Hi to Karen for me.

Guy
Dr. Guy Naughty
21 Bixby Court

Protecting Yourself

- Consider if the place you are posting to removes the meta data (Exif data) from photos that are uploaded
- Don't use Social Media (gasp!)
- Turn off Geo Tagging in your Camera App



What can we learn?



By just reviewing your website ...

- Practice Name
- Doctors Name
- Where its located (and time zone)
- Orthodontic Practice
- Windows Computers (?)
- X-ray machine (?)



And with a bit more research ...

- Who sells that brand of X-ray Machine (?)
- Where that Company is located
- What's the Average Fee for Orthodontic Services



How would you Phish them?

- Email?
 - Unsolicited Resume with infected PDF attached?
 - ChatGPT to the rescue here!
 - Some sort of scam for the X-ray machine?
- How about a Phone Call?



Meet Dr. Thomas & Team



VS.



What do we know so far?

- ThomasOrthodontics.com
- Thomas Orthodontic
- Dr. Larry Thomas
- California Office
- Orthodontic Practice
- Windows Computers
- CBCT X-ray machine
 - But I don't know what model (yet)



To Learn what Brand of X-ray

- Initial Call Video
- See my link to the video on YouTube

And with a bit more research ...

- Dexis Imaging makes the iCAT
- Dexis support of ICAT is in Philadelphia



And now for the win ...

A couple of weeks later I place another call

See my link to the 2nd video on YouTube

With about 15 minutes of time invested ...

- Got a staff member to click on a link
- Accessed Patient Information
- Copied software to a computer in the office and ran an application
- Gathered information about their network
- Copied information out of their office
- Gathered more social engineering info for a future hack if needed

What could they have done?

- Question the validity
- Ask Dr. Thomas if he asked for this
- Call them back
- Never let a stranger onto you computer or device (ever!)
- Make it David's the IT guys problem



Camille and Hilari



AI Generated Images



A very real and unfortunately very near future is upon us where we will be fighting off motivated individuals using AI to attempt to exploit us.

Good guys have AI tools with Morals, Bad guys don't.

Takeaways.....

- Financial Change Policy
- Consider turning of Geo Tagging in Camera App
- Be skeptical of any inbound initiated call that requests information or access to a computer
 - Default to NO unless you confirm
- Explore using ChatGPT for positives within the Practice



Takeaways.....

- Be wary
- Get Cyber awareness training for your entire Team
 - Cyber Insurance Carriers are starting to require
- You are going to need help (Human and/or AI)



Thank You!

Presentation online at
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Technology
Planning
and Integration
for
Dental Specialists



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