Understanding the Risks to the Privacy of Your Data

A review of the most common types or risks to your data and the steps you can take to avoid a data breach.

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Disclaimer

- Chief Compliance Officer ICS Software
- Chief Medical Officer MedXpress Qualified Clinical Data Registry
- President and CEO TLD Systems
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Objectives

- Understand what a Phishing Scheme is and how to identify one.
- Understand what encryption is and why you need to encrypt your data.
- Understand the need for anti-malware.

Phishing

- phish·ing
- ˈfiSHiNG/
- *noun*
- noun: **phishing**
- the fraudulent practice of sending emails purporting to be from reputable companies in order to induce individuals to reveal personal information, such as passwords and credit card numbers.

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Phishing is not limited to emails

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Can be from Known Sources

- **Phishing** emails usually **appear** to come from a well-known organization
  - UPS
  - Fedex
  - A Bank
  - CMS
- Often times **phishing** attempts appear to come from sites, services and companies with which you do not even have an account.

If it looks too good to be true… It is

- Often times **phishing** attempts appear to come from sites, services and companies with which you do not even have an account.

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From: "FedEx.'
To:
Date: Tue, Jan 3, 2017

FedEx

Dear Customer,

We could not deliver your item.

You can review and print complete details of shipping duty on your order.

Thanks

PDF Attachment: update_Form.pdf

From: BankOfAmerica
Subject: Irregular Activity
Date: 10/20/2016 7:27 AM

We have detected irregular activity on your account on the date 10/20/2016. For your protection, we have temporary limited your account.
In order to regain full access to your account, you must verify this activity before you can continue using your account. We have sent you an attachment , open it and follow the steps to verify your account.
Once completed, please allow up to 48h to update.

IrregularActivityFile.html

Move Delete Not Spam More

RE: Delivery For You

=Trusted.Meds= <couhgrt@outlook.com>
To miss_lizzie1@yahoo.com

** Our Bestsellers! **

BEST DRUGS:

Viagra|Price- $0.73
Cialis Price_ $1.10
Viagra Professional|Price= $2.02
Cialis Professional|Price: $2.17
Viagrar (Brand)|Price- $ 5.42
Cialisr (Brand)|Price $ 5.51

Payment: VISA,MasterCard

(Copy and paste the link to your browser)

http://t.cn/R6rigKI

154Zrr

Reply Reply to All Forward More

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Phishing even happens on Facebook and here it gets viral

[redacted] shared a link.

Dunkin Donuts is giving 1 Free Box of Doughnuts to celebrate 50th Anniversary

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Phishing comes in Many Forms

- The common thread is to get you to ‘click’ on something
- That something may
  - Download malware onto your computer
  - Bring you to a site that will exploit your computer
  - Bring you to a site that will have you fill out a form that can compromise your security

Sharing is Caring

- Some of the examples I provided came from sources you may be familiar
- But phishing cam come from friends also.
- If a friends email account is hacked you can get a phishing scam from a friends email account.
  - Help I am stuck in another country
  - Check this out this picture

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Always be vigilant

- Do you know the person the email came from?
- Contact the person in another way to verify the email.
  - If it is a scam let them know their email account was hacked

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Warning Signs

- Download Now
- Click This Link
- Open this picture / document
- Asking for too much information
- Spelling or Grammar errors
- Check the domains in the From / Reply to
- Check the domains in the links

Blocking all email to your practice is a draconian solution

- Many insurance carriers may communicate with your practice via email
- Many professional associations may communicate with your via email
- Completely blocking all email at your practice is a very secure option but not a very viable one

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Protecting your practice from Phishing

- Create a policy that employees may NOT access private email from practice computers.
- Block free email services such as Gmail, Yahoo mail from your practice network (Talk to your IT consultant on how to do this)
- Set up an isolated wireless network in your office so your employees can access their emails from their cell phones
- Provide regular training to your employees on email and computer security.

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Encryption

- en·cryp·tion
- inˈkripSH(ə)n,enˈkripSH(ə)n/
- *noun*
- noun: **encryption**; plural noun: **encryptions**
- the process of converting information or data into a code, especially to prevent unauthorized access.
- "I use encryption to protect sensitive information transmitted online"

Data at Rest

- Data at Rest is information that you have stored on your hard drive or on your backup device.
- Even when the device is turned off, the data is ‘resting’ on the storage device

Data in Motion

- Data in Motion is data that is moving from one place to another
  - Sending electronic claims
  - Sending emails
  - Sending information to an off site backup Service

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Both Types of Data MUST be encrypted

- There are significant risks to your information if you do not encrypt all forms of data.

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For Data at Rest

- If your computer, or other device is stolen or lost
- If it is encrypted, the person who now has possession of your device CAN NOT access your sensitive data
- Many HIPAA breaches have been due to the loss or theft of non encrypted devices
- In each of those cases, had the data been encrypted- it would not have been a breach.

For Data in Motion

- When you are sending information off of your network, once it leaves your 4 walls you no longer have control of it and can no longer protect it.
- Therefore all information you send out that has personal information should be encrypted.
- Most if not all methods of sending electronic claims are already encrypted
- If you use an offsite backup service make sure the data is encrypted before you send it out.

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Methods of Encryption

- Whole Disk Encryption
- File or Folder Encryption

Whole Disk Encryption

- This means when you start your computer you must enter an additional ‘code’ to allow the computer to even start. This is even before you enter your username / password to log on to the computer.
- With whole disk encryption, even if the person who has your stolen / lost computer takes the disk out, and puts it into another computer, they still can not access ANYTHING on the disk.

File or Folder Encryption

- You can start your computer without any additional steps
- But you need the ‘decryption key’ to access any data in encrypted files or folders.

But

- Only the data on the drive is encrypted.
- If you copy / back the data to non encrypted drive the copy will NOT be encrypted.

File Encryption

- File encryption is the process of selecting individual files and having them encrypted.
- If your EMR / Practice Management System encrypt / decrypt information then you have file level encryption.
- File level encryption only protects the information in the files that are encrypted

When the data is encrypted this way

- Even when you create copies of the data, those copies remain encrypted.

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From Microsoft

- With the introduction of Windows 2000, Microsoft added the ability to encrypt individual files or entire subdirectories stored on an NTFS volume in a totally transparent way. To their creator, encrypted files look exactly like regular files—no changes to applications are required to use them. However, to anyone except the creator/encryptor, the files are unavailable. Even if someone did manage to gain access to them, they would be gibberish because they're stored in encrypted form.

But

- Note Encryption is available only on NTFS. If you copy the file to a floppy disk or to any other file system, the file is no longer encrypted. This means that if you have a USB key drive, for example, that is formatted with FAT, or if you use NFS file systems, copying the file there will remove the encryption.

  – https://msdn.microsoft.com/en-us/library/dd163562.aspx

Which Means

- Be careful when copying encrypted files, the copies you create may NOT be encrypted.

What is the difference

- With one method you are putting data into a protected area (the encrypted part of your computer)
- With the other method you are putting encrypted data into a box.
- Moving encrypted data from one box to another- the data is still encrypted
- Moving data from a protected area to an unprotected area the data is no longer encrypted.

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It is important to understand

- The type of encryption you are using and the limitations of that encryption.

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Anti Malware

- Protecting your computers from Malware is EXTREMELY IMPORTANT

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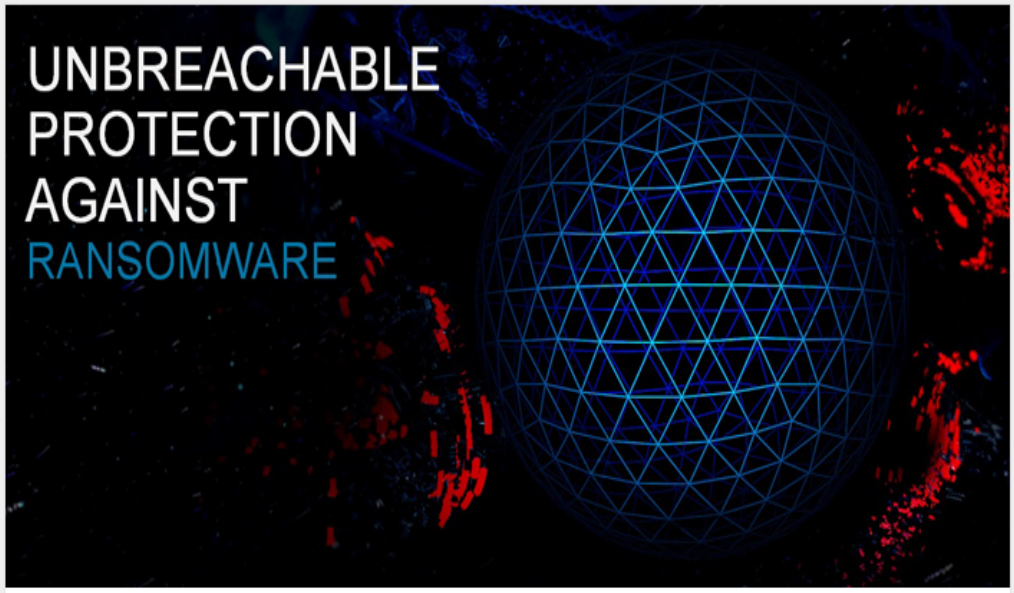
Did you hear about the attack that hit Europe?



Don't worry about world's most advanced piece of ransomware. We've got your back!

Bitdefender's advanced detection technologies have blocked WannaCry from the very beginning

You might have already heard that a new family of ransomware called WannaCry has infected over 140,000 computers worldwide. This piece of ransomware is based on a zero-day exploit that helps it jump from one infected computer to another and encrypt all the information stored on it.

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Some more information on the latest threat

- Unlike other ransomware families, the WannaCry strain does not spread via infected e-mails or infected links. Instead, it takes advantage of a security hole in most Windows versions to automatically execute itself on the victim PC. According to various reports, this attack avenue has been developed by the National Security Agency (NSA) in the US as a cyber-weapon and it was leaked to the public earlier in April along with other classified data allegedly stolen from the agency.

What makes this even more bothersome

- The National Security was Hacked
- The hackers got the NSA ‘virus’ that allows access to Windows
- NSA alerted the public about the hack and the vulnerabilities that they were able to exploit
- Microsoft sent out ‘EMERGENCY’ patches to fix the vulnerabilities
- Antivirus developers developed protections to combat the vulnerability
- This was all available weeks ago

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Simply Keeping Up to Date

- With your antivirus software
- With your operating patches
- PROTECTS you from this form of malware

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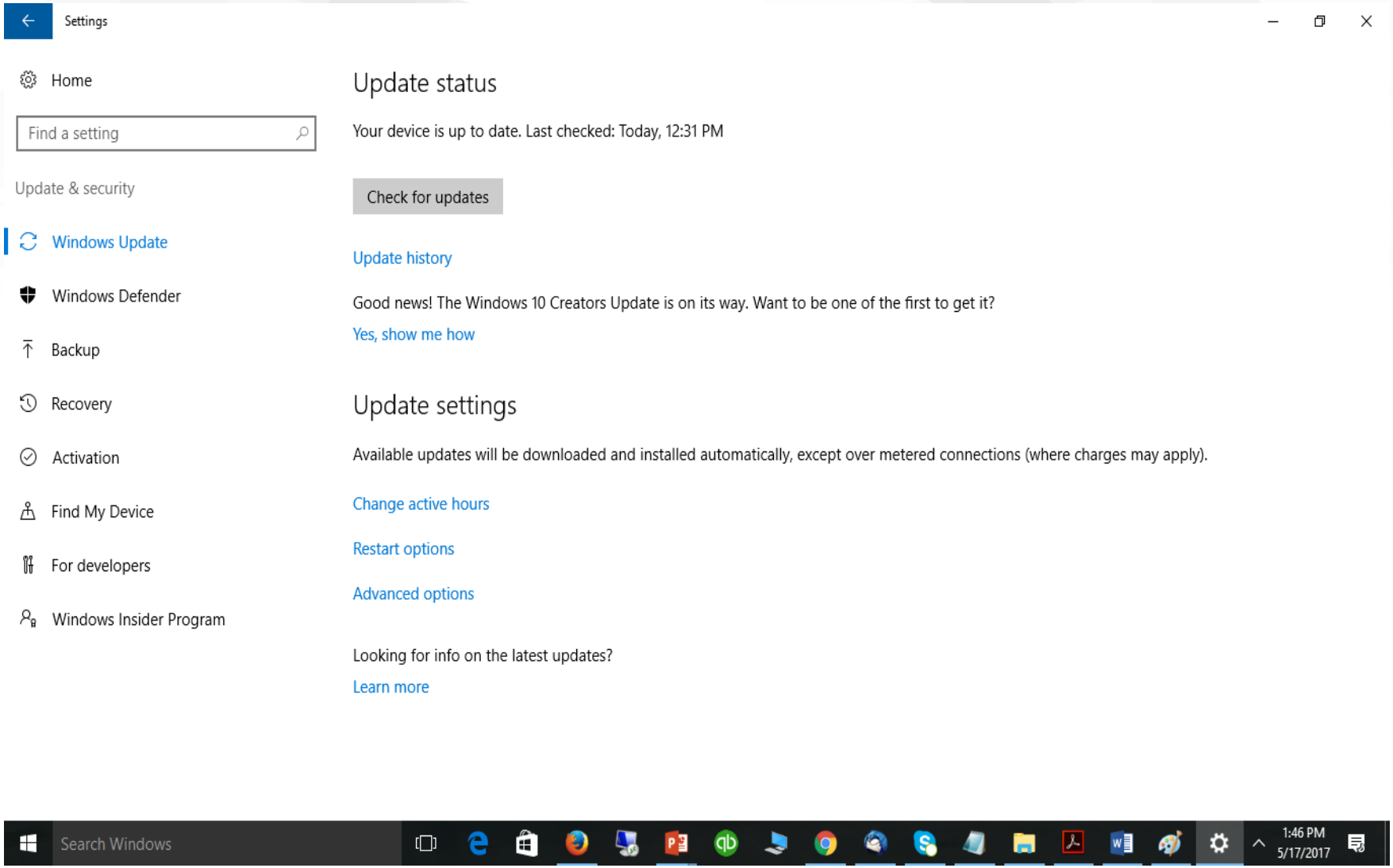

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You and your data are at Risk

- But you can mitigate that risk by
  - Following good practices when using email and surfing the internet
  - Encrypting your data
  - Keeping your computer up to date

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Questions?

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