



HSyE HIPAA Training

Summer 2015



Boston HSyE Extension



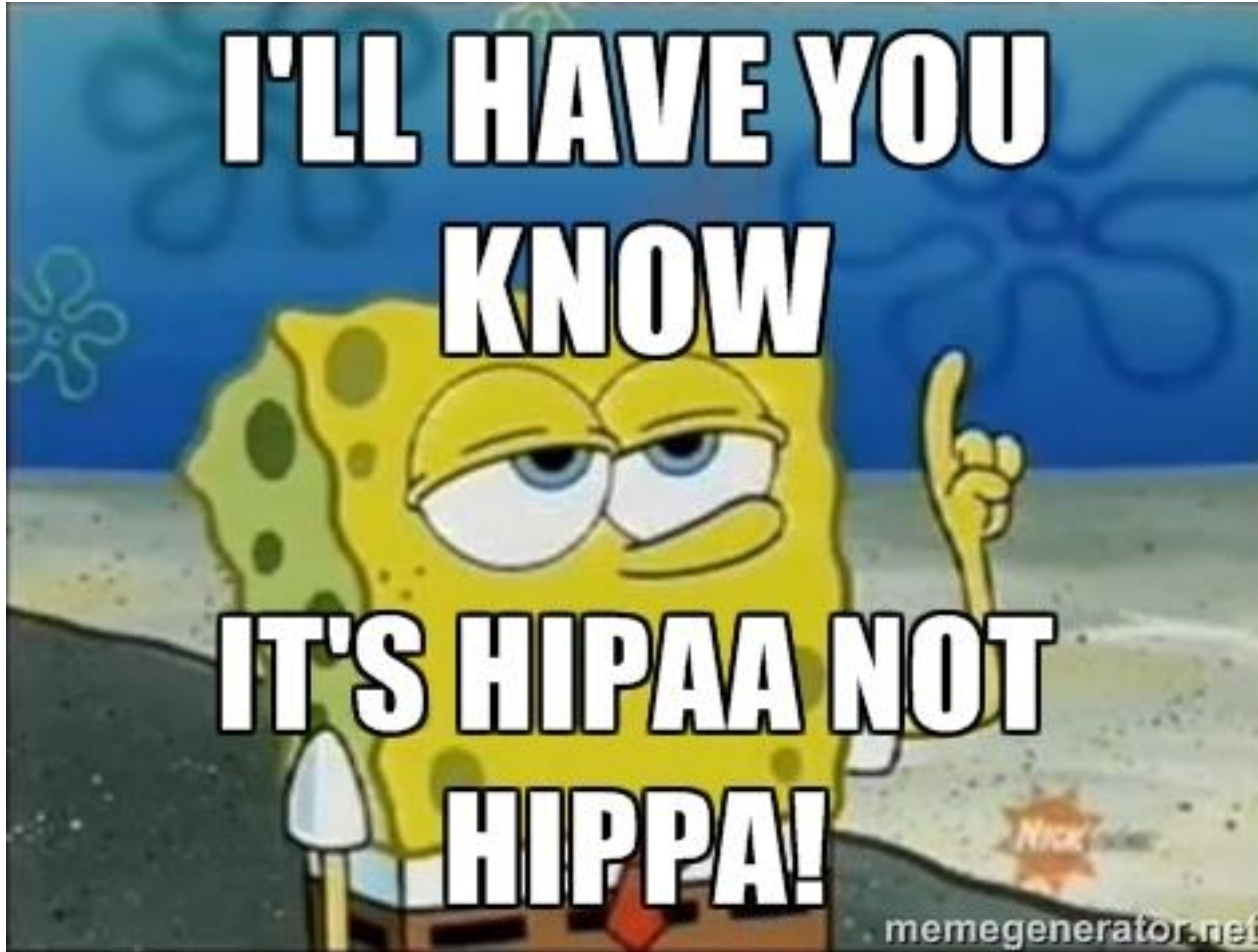
Agenda

- What is HIPAA
- PII
- Electronic Security
 - Data Files
 - Desktops
 - Internet Security
 - Home/Outside Network Security
 - Personal Laptops
 - Cell Phones/ Tablets
- Physical Security
- Reporting Incidents
- Upcoming Security Improvements
- HIPAA Videos!



What is HIPAA?

Health Insurance Portability and Accountability Act



- Governmental policy enforcing security measures on patient health information (PHI) and personal identification information (PII)
- Says we cannot have a breach and must train employees on how to prevent breaches
- HSyE is a Business Associate under HIPAA and so has to follow the same rules/regulations that hospitals do
- However, as we are not a hospital, those regulations are implemented differently

Types of HIPAA Entities

Covered Entities

- Hospitals
- Health Plans
- Providers
- Clearinghouses

Business Associates (HSyE)

- Does one or more of the following
 - **Data Analysis**
 - **Data Aggregation**
 - Claims Processing
 - **Quality Assurance**
 - Legal Services
 - Accounting
 - **Similar Actions**

Source: <http://www.slideshare.net/MayaUppaluru/hipaa-101-for-entrepreneurs>

HIPAA Compliance for Dummies

- Each line of data is a person, treat it like a person
- Pretend that a hacker or “bad guy” got a hold of the information. What would happen?
 - Could he identify a person?
 - Could a patient’s identity be stolen?
 - Would he know about a patient’s medical conditions?
 - What if the patient was a very private person?
- Think of how a hacker or “bad guy” could get a hold of the information. How can you protect it?



What is PII?

What is Sensitive?

- If any person would not like the information published, it is sensitive
- If a news outlet would enjoy doing an expose on the information, it's sensitive
- If identity theft, blackmail, or another crime could be committed using the information, it's sensitive
- Examples:
 - anything containing PII (can identify any person)
 - any info about hospital X having issue Y (hospital X kills 5 people/year with CT radiation!)
 - doctor X being an outlier in measure Y (Dr. X prescribes more opiates than all other doctors!)
 - etc.

Identifying PII

- To desensitize data, remove
 - Names
 - Addresses
 - Phone Numbers
 - Social Security Numbers (SSN)
 - Zip Codes (for zip codes with not a lot of people)
 - Credit Card numbers
 - Email address
 - Date of Birth (DOB) if accompanied by a place and/or time of birth
 - Workplace/job
 - etc



Fun Fact: 87% of the US population can be uniquely identified by just gender, zip code, and DOB.¹

¹ Sweeney, Latanya. "Simple Demographics Often Identify People Uniquely". 2000.

Electronic Security Measures

Electronic Security At HSyE



- Northeastern prevents almost all electronic threats
 - This means that if an adverse event occurred, there is a 99% chance it was due to user error
- Good news is that HSyE is currently a small target
 - Bad news is that Macs used to be small targets
 - Other bad news is that Northeastern is not a small target

Preventing Leaks: Data Use

- As soon as you get a data file, check it for PII and remove all info possible
- If 100% of PII cannot be removed or you are not 100% sure that all PII has been removed, encrypt the file
- **Do not email unencrypted files with raw or aggregated data**
- Store all project-related files on the data server (coming soon!)



Good practices in file encryption



- Do not be scared of encryption. All Office programs and Adobe can do it for you
- When communicating the password, do not send it via IM, text message, or in the same email as the file. Ideally, call the person you are sending the file to and tell them the password verbally
- Good passwords are easy to remember and do not have to be written down
- Passwords that are sentences (or 4 words) are actually harder to hack than a single dictionary word with common substitutions (like A = 4 and so on)
- Also consider using a phone keypad to encode letters to numbers to add security. Like MGH = 644

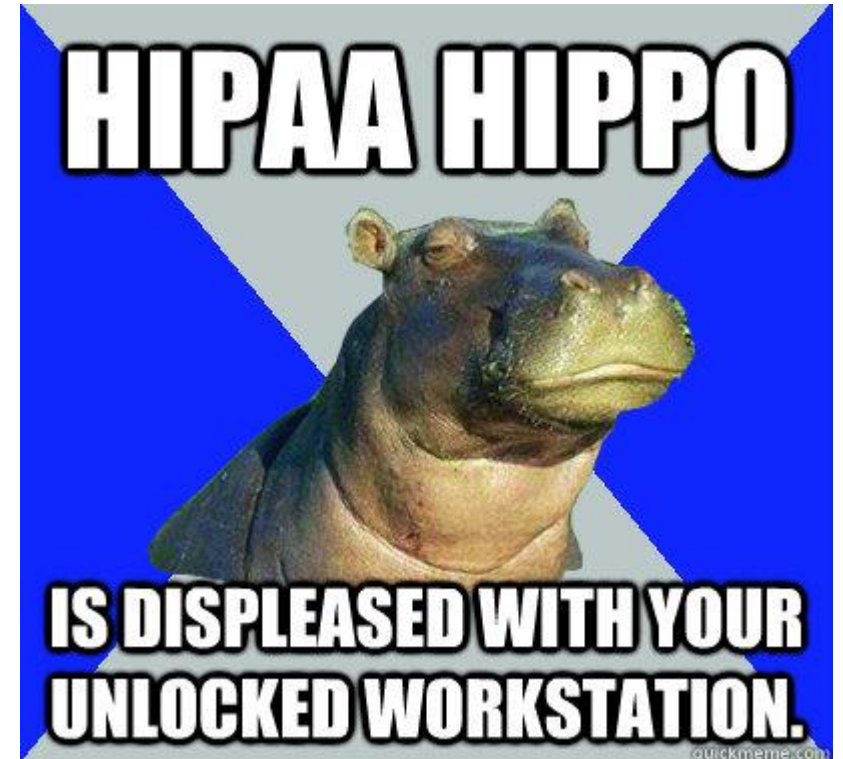
Why can't I just tell the person I'm sending the file to to just delete it after?

1. **Emails can be intercepted**
2. **Email addresses can be messed up** (eg: Samy's email is hay.sa@husky.neu.edu so if someone accidentally emailed the file to hay.s@husky.neu.edu, that would be a breach)
3. **Deleted files are not actually deleted (fun facts guys!)**
 - Deleted files can be recovered
 - You can bypass this in 2 ways
 1. You can encrypt the file before deleting it so the 1's and 0's are all scrambled and can't be recovered
 2. You can use a program to make all the 0's in that section into 1's or to make all the 1's in that section into 0's

01001000 01010011 01111001 01000101 == HSyE

Preventing Leaks: Desktop Use

- Our desktops are pretty secure (Thanks Northeastern!) but user error can still cause issues
- There are 3 major ways that your desktop can be the source of a leak:
 1. You don't lock your desktop before leaving for more than 5 minutes (they do not lock automatically!)
 2. You expose protected/sensitive information to others by
 - a) Emailing unencrypted files
 - b) Leaving files open for others to read
 - c) Sharing protected/sensitive information with others not on the same project
 3. You infect the computer (due to antivirus and firewalls, this has to be done forcibly and not accidentally.)



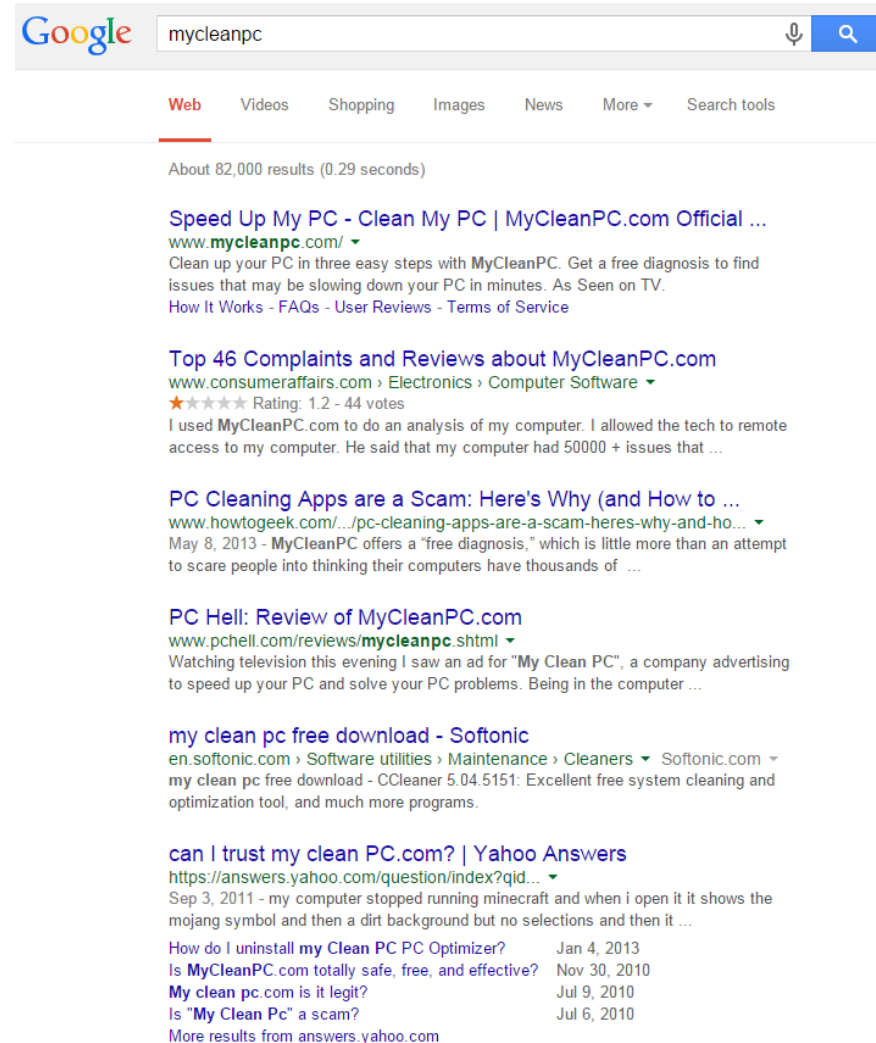
Preventing Leaks: Internet use

- If there were rules for the internet, #1 would be **don't click on things you don't trust**
 - Trusted sites/programs can have malicious ads
 - Do not trust ANY free software
 - Phishing
 - When in doubt, google the name of the software. If any result on the first page is something like “How do I remove X?” or “Virus Alert!” or anything similar, DO NOT INSTALL IT
 - All toolbars are viruses and all toolbars are dumb.
 - Anything that says it will make your computer faster will make it slower

Preventing Leaks: Internet use

- All YouTube video downloaders/YouTube to mp3/4 converters are viruses
- All coupon websites/apps/toolbars/programs are viruses
- Two antiviruses are worse than 1
- Use Symantec (it's free through NU). Do not install any free AV without consulting the internet/Samy
- When in doubt, ask Samy. Her other job is her undoing these bad decisions for people.

Example: What not to trust



Google mycleanpc

Web Videos Shopping Images News More Search tools

About 82,000 results (0.29 seconds)

Speed Up My PC - Clean My PC | MyCleanPC.com Official ...
www.mycleanpc.com/ ▼
Clean up your PC in three easy steps with MyCleanPC. Get a free diagnosis to find issues that may be slowing down your PC in minutes. As Seen on TV.
[How It Works](#) - [FAQs](#) - [User Reviews](#) - [Terms of Service](#)

Top 46 Complaints and Reviews about MyCleanPC.com
www.consumeraffairs.com > Electronics > Computer Software ▼
★☆☆☆ Rating: 1.2 - 44 votes
I used MyCleanPC.com to do an analysis of my computer. I allowed the tech to remote access to my computer. He said that my computer had 50000 + issues that ...

PC Cleaning Apps are a Scam: Here's Why (and How to ...
www.howtogeek.com/.../pc-cleaning-apps-are-a-scam-heres-why-and-ho... ▼
May 8, 2013 - MyCleanPC offers a "free diagnosis," which is little more than an attempt to scare people into thinking their computers have thousands of ...

PC Hell: Review of MyCleanPC.com
www.pchell.com/reviews/mycleanpc.shtml ▼
Watching television this evening I saw an ad for "My Clean PC", a company advertising to speed up your PC and solve your PC problems. Being in the computer ...

my clean pc free download - Softonic
en.softonic.com > Software utilities > Maintenance > Cleaners ▼ Softonic.com ▼
my clean pc free download - CCleaner 5.04.5151: Excellent free system cleaning and optimization tool, and much more programs.

can I trust my clean PC.com? | Yahoo Answers
<https://answers.yahoo.com/question/index?qid...> ▼
Sep 3, 2011 - my computer stopped running minecraft and when i open it it shows the mojang symbol and then a dirt background but no selections and then it ...

How do I uninstall my Clean PC PC Optimizer?	Jan 4, 2013
Is MyCleanPC.com totally safe, free, and effective?	Nov 30, 2010
My clean pc.com is it legit?	Jul 9, 2010
Is "My Clean Pc" a scam?	Jul 6, 2010

More results from answers.yahoo.com

A new threat: fake URLs

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[java for windows 8.1 - Microsoft Community](#)

[answers.microsoft.com/en-us/windows/forum/windows8_1-hardware/java...](#) ▾

Resolved · Last updated: Mar 26, 2014 · 2 posts · First post: Oct 25, 2013

That is indeed the official place to get it. Unless you really NEED java, I recommend not installing it at all, because it tries to install that other junk ...

JAVA AND WINDOWS 8.1 – MICROSOFT COMMUNITY Apr 29, 2014

Java 7u51 and Windows 8.1 64 bit Nov 27, 2014 Resolved

Java is incompatible windows 8.1 pro 64bit with enhanced ... Nov 01, 2013 Resolved

[Install Java in Internet Explorer - Windows Help](#)

[windows.microsoft.com/en-US/internet-explorer/install-java](#) ▾

Internet Explorer 11 Internet Explorer 11 for Windows 7 Internet Explorer 10 Internet Explorer 10 for Windows 7 Internet Explorer 9 ... Windows downloads ...

[Install, Upgrade, & Activate](#) · [Why Windows](#) · [Downloads](#)

[Windows 8.1 compatibility for Java version 7](#)

[www.microsoft.com/en-us/windows/compatibility/CompatCenter/Product...](#) ▾

Learn about Java compatibility on Windows 8.1. Download device drivers and software updates.

[Tips for using Java on Windows 8 - java.com: Java + You](#)

[www.java.com/en/download/faq/win8_faq.xml](#) ▾

Is the Java download available for the Windows Surface tablet? No, since the Windows Surface tablet does not support the Java plug-in, ...

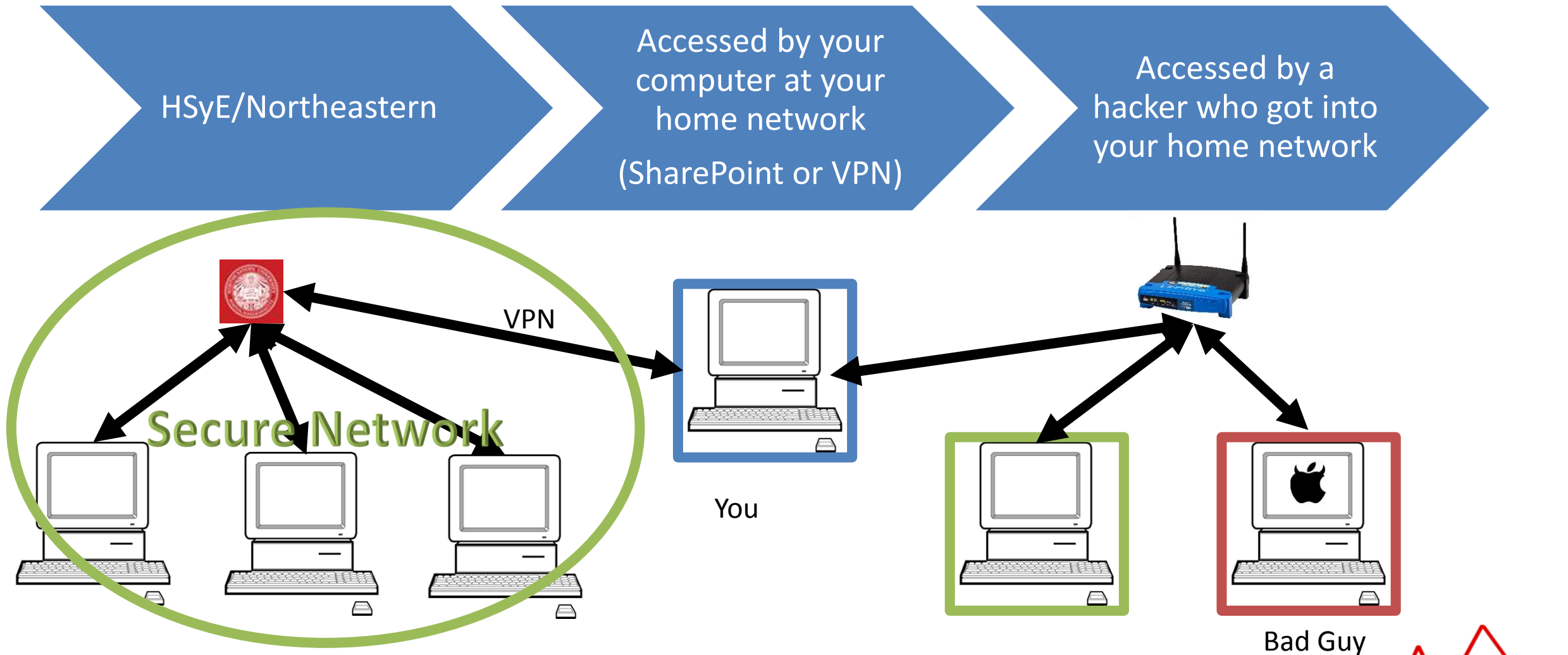
VALID URLs

- <http://www.example.com/>
- <http://example.com/>
- <http://blog.example.com>
- <http://www.example.com/blog/>
- <http://www.example.com?string>

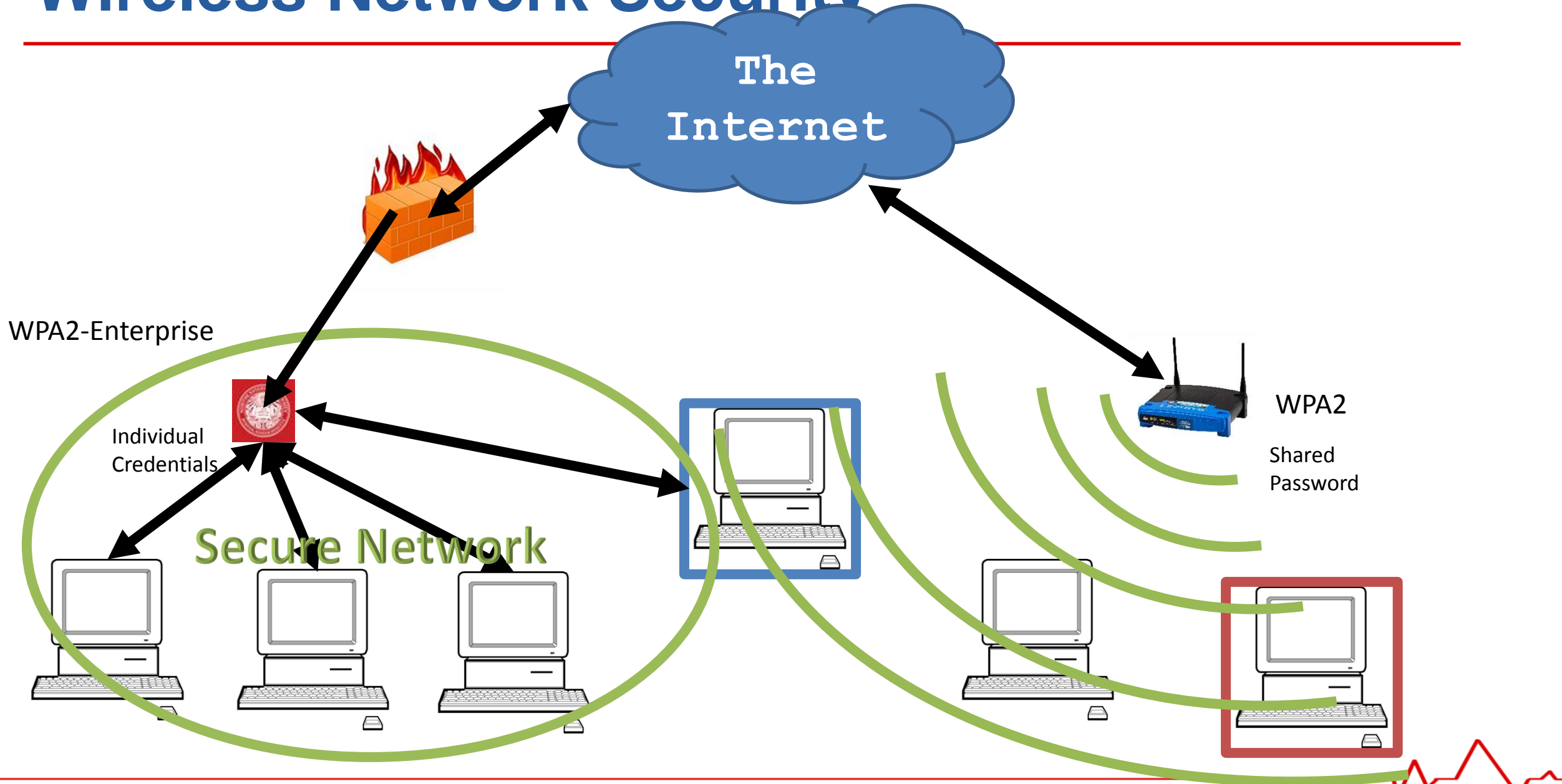
INVALID URL

- <http://www.example.fakeurlgoeshere.com/>
- <http://example.fakeurlgoeshere.com/>
- <http://www.example.com.fakeurlgoeshere.com?string>

Electronic Security Outside HSyE



Wireless Network Security



Personal Computer Policy



- **The largest risk to any data at HSyE comes from personal computer use**
- Starting 5/1/15, personal computer use will require authorization from a staff member and a signed note from Samy (only certified office technician, can also do this in 5-15min) saying that your computer does not have any malware that can compromise our data
 - Eg: cryptolocker
- All personal machines need up-to-date Antivirus (even/ESPECIALLY Macs), OS, Java, Adobe, etc (everything!) and only computers with win7 or newer (or OSX 10.8 or newer) are allowed
 - Eg: Java on OSX
- After a machine is done being used, unencrypted data files will need to be both deleted and sanitized (deleted != sanitized)
- Only secure wireless networks (NUWave, WPA2, secure password, secure admin panel) can be used (Samy also has a router certification if you want to bring one in to make sure it's safe)

Real World Example

Scan Results

File Name	Details	Status
/Users/yourdestiny9...-SEO-10137881.dmg	Trojan.Gen.2	Infected
/Users/yourdestiny9...Volume.4.2013 (1).exe	Trojan.ADH.2	Infected
/Users/yourdestiny9...ed.Volume.4.2013.exe	Trojan.ADH.2	Infected
/Users/yourdestiny9...ConverterSetup-1.exe	Trojan.Gen	Infected
/Users/yourdestiny9...ConverterSetup-2.exe	Trojan.Gen	Infected
/Users/yourdestiny9...icConverterSetup.exe	Trojan.Gen	Infected
/Users/yourdestiny9...up-make-2014 (1).exe	Trojan.Gen.2	Infected
/Users/yourdestiny9...tchup-make-2014.exe	Trojan.Gen.2	Infected

Delete

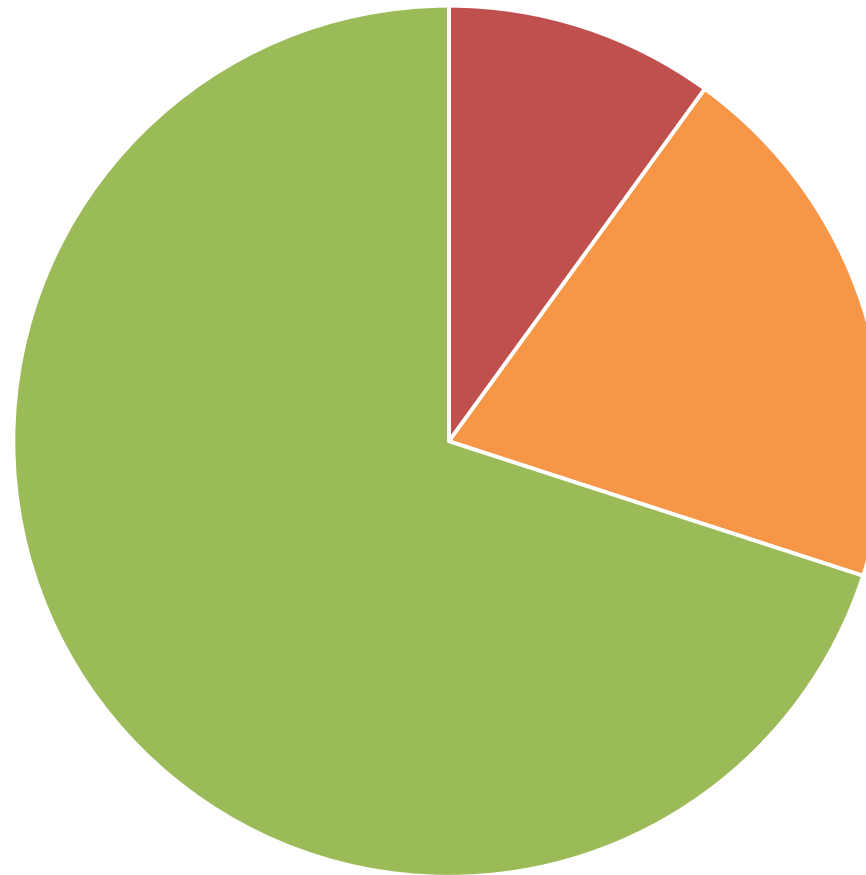
Repair

Repair All

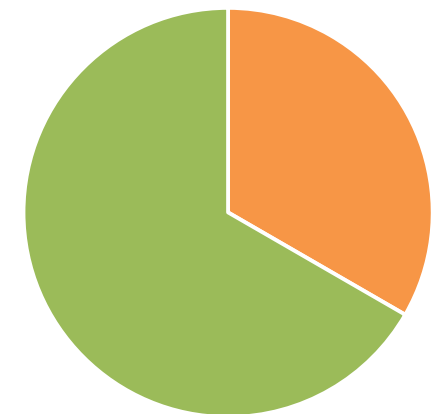
Done

N = 10

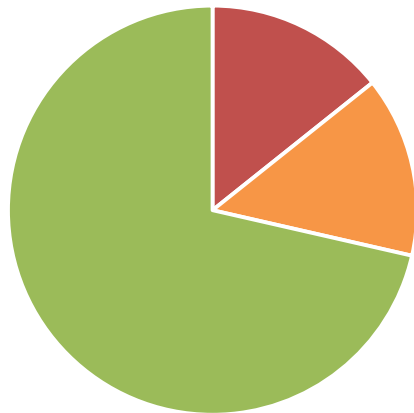
Overall



Macs



PCs



■ Severely Infected ■ Infected ■ Clean

■ Severely Infected ■ Infected ■ Clean

■ Severely Infected ■ Infected ■ Clean

Other Personal Electronic Devices

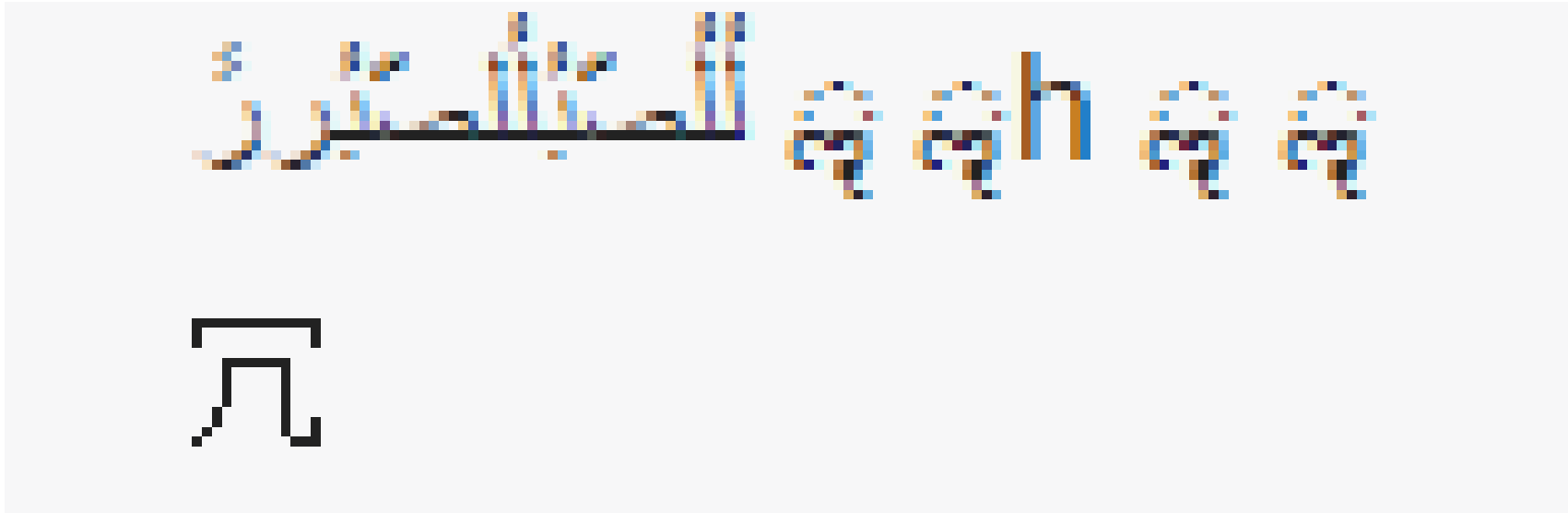
- **PHONES GET VIRUSES TOO**
 - Install apps from Norton, McAfee, or AVG (ALL FREE!!!)
- Do not text sensitive info (the fact that we are doing a project with hospital X about issue Y is sensitive)
- Do not download secure HSyE email attachments on your phone/tablet
- Password protect/lock your phone/tablet/etc so if it is lost/stolen, no one can get your email account, downloaded files, etc.
- Only connect to secured wireless networks
 - Ex: Nuwave, not Nuwave-guest



This just in: I'm always right.



It's not just Android...



5 min break: GET AN ANTIVIRUS... NOW

Android

- AVG
- Avast
- Avira
- Norton
- McAfee
- Kaspersky
- Malwarebytes

iPhone

- Avira
- Norton
- McAfee
- Trend Micro

Physical Security Measures

HSyE Office

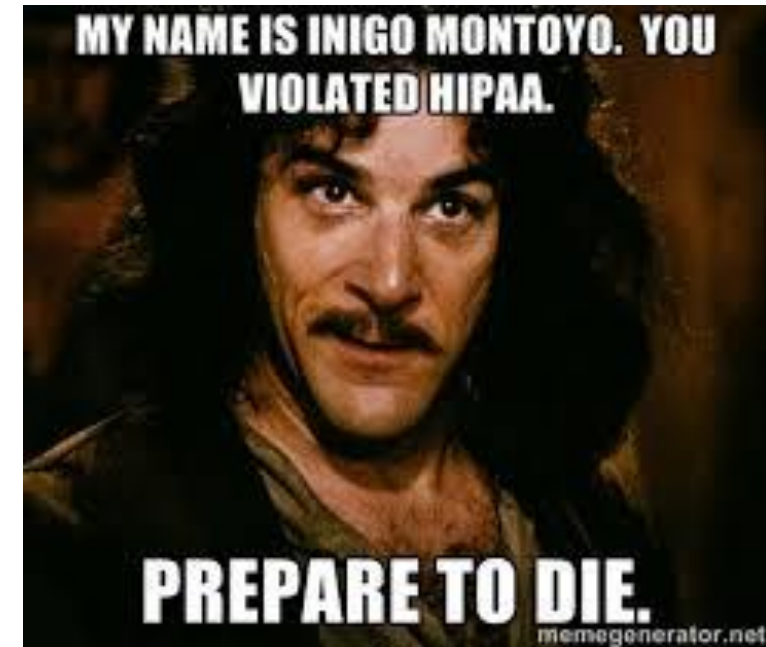


- When you leave the office for the day, clear off all sensitive papers from your desk (if papers have PII/PHI, lock them in your desk drawer if possible)
- When disposing of sensitive papers, shred them, don't throw away/recycle (shredder coming soon!)
- When there are visitors to the office, they should be escorted/monitored at all times (aka just not left alone with computers)
- Be aware of conversations that may contain sensitive information, especially around visitors
- Make sure that 243 and 253 are locked when empty

Reporting Incidents

Hey Samy, I did a bad...

- If you commit a HIPAA violation (or are not sure whether or not you committed a HIPAA violation), report it to a HIPAA committee member (Dr. Haas, Sarah B, Samy) **immediately** as there are some things we legally have to respond to within a certain timeframe
- If you know of a HIPAA violation (past, present, or future), report it to the HIPAA committee
- If the violation is accidental, the only consequence will be further education. As is done in some hospitals, if you make a mistake, you must become an expert/advocate of that mistake to help prevent others from making it
- If you see a system vulnerability that could lead to a violation, please notify the committee so we can try to mitigate the risk



Future System Improvements

Upcoming Security Features:

- Secure HSyE Data Drive
 - Only accessible from Northeastern (wireless or wired)
 - Everyone will need a @neu.edu account
 - Will be used to store all project files. SharePoint will be administrative/training files
- Secure shredder
- Fun Audits: If I catch you doing good things, you get a candy. Otherwise, you get a picture of a sad puppy (or just no candy)



HIPAA Videos

We're too special for normal HIPAA videos...

- No videos exist for our specific type of HIPAA Business Associate, just for hospitals and maybe the companies that shred medical records / transcribe them
- FUN PROJECT TIME

Recap

Policy Recap

- Electronic
 - Remove as much PII as possible from data sets
 - Get authorization (there's a form!) before using personal machines
 - Encrypt potentially sensitive files before emailing
 - Lock your machine when you leave for more than 5min
 - Be aware of potential malicious software and avoid downloading any
 - Don't enable data theft
- Physical
 - Don't leave papers with sensitive information lying around
 - Shred sensitive papers instead of throwing away/recycling them
 - Don't discuss sensitive information in front of non-HSyE employees



FUN QUIZ!!!

Can I work on CMS Projects at home if I'm taking a sick day?

YES

NO

Can I work on CMS Projects at home if I'm taking a sick day?

YES

NO

personal wireless networks are not secure enough for healthcare data. However, you can work on internal projects, literature reviews, and other non-sensitive things that do not require connecting to the data server / secure information

Can I load my project files onto my laptop to ~~work on while I'm at a conference?~~

YES

NO

Can I load my project files onto my laptop to work on while I'm at a conference?

YES

NO

Conference networks are not guaranteed to be secure (and are likely less secure than your home network). Also, personal laptops cannot have data on them without approval

A good rule of thumb for Wi-Fi is to treat it like a restroom.

My laptop is faster than my desktop, can I use it instead?

YES

NO

My laptop is faster than my desktop, can I use it instead?

YES

As long as you have approval and a signed laptop approval form, you can use your personal computer. However, speed alone is probably not enough of a reason to use your personal machine. Valid reasons include: testing software/program run speeds on a different platform, using different software we don't have, bringing live demos to health system meetings, etc

NO

My project requires some PII. What do I do?

- A. Just encrypt everything
- B. Delete all unnecessary PII, then encrypt everything
- C. We can't do those projects
- D. Email all the unencrypted data to Samy and have her deal with it
- E. Give up and look at pictures of corgis on BuzzFeed

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E. Give up and look at pictures of corgis on BuzzFeed

My name is Samy and I
approve this corgi



Questions?
