

**PHPM 631 Assignment 6: Security & Privacy Worksheet and Flyer**  
**Due date: Submit on E-campus by 11:59pm Sunday 3/31**

**Submission.** Submit on E-campus by 11:59pm the day before the class they are due.

- One zipped file of the following files
  - Team worksheet answering the questions below in a word document
  - [Individual Task] One page security & privacy information sheets (both word & pdf)

**Late Assignments:** Each student will be allowed one late assignment, due 7 days from the due date. NO other late assignments or make up will be accepted.

**Plagiarism:** If you consult any outside sources when doing your work, you are expected to further document these sources. Give credit where credit is due. Plagiarism will not be tolerated.

**Guideline for assignment grading (4%)**

- 70% (70 points): Bad (√ --) Did NOT follow all instructions
- 80% (80 points): Reasonable (√) Followed all instructions
- 90% (90 points): Good (√) Followed all instructions, and did good work
- 100% (100 points): Great (√ +) Followed all instructions and did great work

**Objective**

By the end of this assignment, you should be able to

- Distinguish among privacy, confidentiality, security, and accountability as they relate to health information
- Identify threats to health care information and information systems, both negligent and malicious
- Describe mitigation options.

**Team Project**

You are encouraged to work in a team of 3 for this assignment. If you do, all of you will receive the same grade for this part of the assignment. Submit one assignment for the whole team. BUT at the very top, clearly label that you worked as a team and the name of the team members. You may choose to work alone, but you will be expected to do the same amount of work as a team. Make sure to label who did what for the individual tasks noted below.

Privacy note: I may share good submissions in class as well as post online.

**Required Reading for this Assignment**

See the readings assigned for the next two weeks covering Privacy and Security (i.e., Chapter 9 and articles and online materials).

Articles & online materials for this assignment (repeated from the class website for your convenience)

1. [A] Goth G. Running on EMPI. Health information exchanges and the ONC keep trying to find the secret sauce of patient matching. Health data management. February 2014;22(2):52-52, 54, 56 passim.
2. [L] Tutorial on Privacy Preserving Interactive Record Linkage.
  - a. <http://newtutorial.herokuapp.com/?mode=4>
3. [A] Weitzner DJ, Abelson H, Berners-Lee T, Feigenbaum J, Hendler J, Sussman GJ. Information accountability. Communications of the ACM. 2008 Jun 1;51(6):82-7
4. [A] S. Fienberg, Confidentiality, Privacy and Disclosure Limitation, Encyclopedia of Social Measurement, Academic Press, 2005, pp. 463–469.
5. [A/L] Institute of Medicine (US) Committee on Health Research and the Privacy of Health Information: The HIPAA Privacy Rule **Summary**; Nass SJ, Levit LA, Gostin LO, editors.

Beyond the HIPAA Privacy Rule: Enhancing Privacy, Improving Health Through Research. Washington (DC): National Academies Press (US); 2009. Summary. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK9581/>

6. [A] Arvind Narayanan and Vitaly Shmatikov. Myths and fallacies of personally identifiable information. Communications of the ACM, 53(6):24–26, 2010.
7. [L] Zero-day attacks are meaner, more rampant than we ever thought. <https://arstechnica.com/information-technology/2012/10/zero-day-attacks-are-meaner-and-more-plentiful-than-thought/>

### **Assignment:**

#### **I. Worksheet: Answer the following questions in a word document and submit (single space).**

- Q1: Basics
  1. Define the following terms and discuss how they are different as well as how they relate to each other: Information Privacy, Information Security, Confidentiality. Information accountability.
- Q2: HIPAA
  1. Summarize the HIPAA Security Rule in one paragraph (no more than 300 words)
  2. Summarize the HIPAA Privacy Rule in one paragraph (no more than 300 words)
  3. Summarize the different HIPAA safeguards in one paragraph (no more than 300 words)
  4. List three circumstances when a covered entity may release PHI without patient informed consent.
- Q3: Medical Identity Theft - Use the internet to answer the following questions
  1. What is Medical Identity Theft ? (reference the source of your answer)
  2. **[Individual Task:** each person must do this. So 2\* number of team members] Find videos of real people who are victims of medical identity theft on youtube and watch at least two. Summarize what happened (remember to include the link)
  3. List one hospital policy that can mitigate medical identity theft?
- Q4: Malware & IT Security
  1. What is ransomware ?
  2. List three other types of malware and what it is
  3. List three hospital policies that can mitigate risk from malware ?
- Q5: Privacy, PHI and patient matching. Make sure to do the read article 1 (Goth 2014), and tutorial 2 above (Tutorial on Privacy Preserving Interactive Record Linkage)
  1. What is a patient matching?
  2. List three reasons why patient matching is difficult.
  3. List at least one harm that may result from the patient matching process when there is too much emphasis on privacy protection
  4. List at least two ways that privacy can be enhanced while still keeping data quality high.

#### **II. [Individual Task: each person must create one.] One page Information Sheet for Hospital Staff**

- Synthesize everything you learned to create an information sheet to print as flyers to distribute widely among hospital staff for training.
  - Format it as a flyer, with the front page being an information sheet for security, and the back being an information sheet for privacy.
  - Remember to submit both the word version and the pdf version.
  - Name the file with the last name of the author.
  - Submit everything as one zipped file for a team.