*Research Strategy: < I am pursuing research on smart healthcare privacy from the perspective of ICT. Since the topic is broad, I chose to research how the use of information communication technologies in smart healthcare endangers patient’s privacy. There are a lot of sources that talk about this topic. However, not all are credible. So, I used Google Scholar and Objee search to find sources that were both scholarly and peer-reviewed. To get sources that are closely related to my topic I used advanced search features with keywords like “ICT”, “smart healthcare”, and “ privacy”. I got many sources, but to narrow it down I used web sources, journal articles, and research publications that were released from 1990-2021.>*

Wielawski, Irene. (2020). Are Patient Privacy and Health Data at Risk? AJN, American Journal of Nursing, 120, 19-20.

Personal health data has become a valuable asset. Taken from the American Journal of Nursing, the author argues that researchers, health-care agencies, and, most recently, big technology companies like Google and Facebook are all searching for new ways to collect patient health information for a number of reasons, including enhancing research and health-care system efficiency, as well as creating new revenue-generating goods. Even though the use of ICT in the healthcare environment could potentially improve diagnosis and treatment, patient privacy standards and regulations are being questioned by collaborations between technology firms and health systems. For example, according to a study published in April 2019 in JAMA Network Open, 29 of 36 mobile applications for depression and smoking cessation sent users' personal and identifying information to Google and Facebook for advertisement and promoting reasons. In addition, several health-related mobile applications, including one that helps women track their ovulatory cycles and another that helps people track their heart rate, secretly sent users' data to Facebook, which then sold it to marketers.

I chose this source because it will help me to define my research problem. specifically, it will help me to show my audience that the fact that technology companies can access patient’s records without them knowing poses a threat to their privacy.

I liked how the author provided event-based information about the scandals that occurred due to sharing of information between health systems and tech companies. In addition, this source has a connection with the study from the journal of medical systems that shows how mobile applications endangers patient’s privacy. The connection helped me to understand my research problem more and helped me with researching more why technology companies are interested in patient information.

O’Neill, L., Dexter, F., & Zhang, N. (2016). The risks to patient privacy from publishing data from clinical anesthesia studies. Anesthesia and Analgesia, 122(6), 2017-2027.

In this article, the authors discuss the privacy concerns of publishing patient’s data in anesthesia. While the process is believed to delete elements that could be used to re-identify the individuals, the scientists have shown that the process is flawed which results in patient privacy implications. Done by researchers from the state of Texas, the statistics show that there is a 42.8% probability that attackers or third parties would be able to match pictures from a patient’s record to an external database outside the state.

Although this is a small probability, there are also big chances that the database might contain thousands, or millions of patients record making it possible to get information for more than 100 patients. I chose this source because it provided me with information that will help me to identify my research problem. Specifically, this source will help me to show my audience how ICT poses a threat to patient’s privacy by providing scenarios and cases that happen in our everyday life.

This source was taken from Anesthesia & Analgesia (A&A), the first scholarly publication that includes peer-reviewed and original clinical and research articles. The author used surveys, observational studies, and an anonymization framework to test different assumptions. In addition, this source contains information that is pretty straightforward, and it was lengthy which provided me with a lot of information that helped me to define and understand more my research problem.

O'Dowd, A. (2013). MEDICAL DATA: Does patient privacy trump access for research? BMJ: British Medical Journal, 347(7924), 20-21.

Taken from British Medical Journal, Patient data are useful resources for medical research, but as Adrian O'Dowd points out, efforts to expand access are raising concerns about patient privacy. Patient's medical records are currently accessible to researchers through a clinical patient research connection. The electronic health reports that have been handed over have been anonymized. However, people have recently expressed privacy concerns about the government's announcement that it plans to benefit from NHS electronic health records by selling them to the industry for research purposes.

I chose this source because it will help me to define my research problem. Specifically, this source will provide me with arguments that I will use to convince my audience that ICT poses a threat to privacy in the healthcare environment. For example, this article raises concerns about how clinical data contains personal information like age, address, names, sex, and doctor-patient notes. Handing this information to researchers could potentially expose individuals’ privacy which is an ethical issue that needs to be addressed.

This source is relatively straightforward, the author provided many viewpoints from different researchers, and it was easy for me to get information that helped me better understand the research problem that I am defining. However, it was small, and the author did not provide enough evidence that supports the arguments from a different perspective.

Ozair, F. F., Jamshed, N., Sharma, A., & Aggarwal, P. (2015). Ethical issues in electronic health records: A general overview. Perspectives in clinical research, 6(2), 73–76.

Many developed countries are rapidly implementing electronic health records (EHR). It is greatly needed because it increases health-care quality while still being cost-effective. Despite its increased advantage and the excitement for its adoption, there are privacy concerns that emerge due to the inappropriate use of electronic health records. Since technologies may introduce certain risks, maintaining the privacy of information in the system is a significant challenge because of the recent news of security breaches. The author argues that patients' privacy is jeopardized when their health data is communicated or shared without their consent. Due to a lack of trust in the security of the system that holds their data, the patient can withhold information. As a result, their treatment could be seriously compromised.

I chose this article because it will help me to define my research problem. Specifically, reading two recent events at Washington's Howard University Hospital, gave me more understanding of how weak data protection can damage a large number of people due to the information exposure.

The author is straightforward, and the information presented has connections with other sources related to this particular research problem. For example, where they talked about how mobile phones pose a threat to privacy when used in the healthcare environment. According to the authors' study, 73% of doctors text each other about their work. This causes privacy concerns because multiple times mobile devices are stolen or misplaced which results in patient’s information being in the third parties’ hands.

Hale, T. M. (2014, December 1). Privacy and Security Concerns in Telehealth. Journal of Ethics | American Medical Association.

Telehealth is the use of ICT to access healthcare services remotely. According to Hall and McGraw, telehealth systems pose major privacy and security threats, which can damage patients' and clinicians' trust and ability to implement and use the system. Hall and McGraw argue that multiple times home telehealth devices and sensors that detect falls can collect and transmit information about behaviors in the home that a patient prefers to keep private, such as drug abuse or the fact that the house is unoccupied at a specific time. As a result, there is a risk that unauthorized users might be able to access the information. Hall and McGraw continue by showing how current regulations have flaws and are insufficient to provide enough privacy protection to the patients.

I chose this source because it will help me to define my research problem. Specifically, this source has information about patients with chronic illness who might be affected the most if their information is exposed.

The author was not biased and provided information from a different perspective. He gave the information that shows how the use of ICT in the healthcare environment jeopardizes patient’s privacy and also provided ways to minimize the risks. Not only this will help me to show my audience where the problem is, but it will also help me to find the solutions to my research problem.

Brisson, Gregory & Tyler, Patrick. (2016). Medical Student Use of Electronic Health Records to Track Former Patients. JAMA Internal Medicine, 176, 1395-1397.

In their education, medical schools are constantly using electronic health records. One educational application of EHRs is to monitor former patients after they have left one's direct care. EHRs encourage students to audit their diagnostic ideas and observe patient results by offering longitudinal access to potential clinical data. Taken from JAMA internal medicine publications, the authors argue that despite its educational potential, monitoring former patients poses ethical issues including patient’s privacy and how confidential health information can be used. In the survey done by senior medical students, a total of 103 of 169 students (60.9%) responded that tracking former patients help them to confirm diagnoses and follow up patients. in 103 students who responded, 17.2% reported that they have privacy concerns because sometimes they track patients out of curiosity since the process occurs in absence of institution direction.

I chose this source because it will help me to define my research problem. For example, if I am a patient who struggled with mental health issues and later recovered from them, I would not want other people to find out other than my doctor. Knowing that many other people are going to know about my situation would make me uncomfortable. All in all, this source will help me show my audience that unauthorized users are not only people outside the healthcare environment but also people inside.

I liked how the authors survey students who are in the medical field. Although the results portrayed the positive side of using ICT in healthcare, they also did not tell the whole story and they do not show how the patients feel about the activity of using their medical records for educational purpose.