**Week 11 Discussion:**

**Ethical issue**

Data mining is extracting useful patterns and insights from large and complex datasets to help organizations make better decisions, optimize performance, and discover new opportunities. In health care, there is also a significant effect on patient privacy and security whose data is being mined.  Business today operates on sector specific regulations and their beliefs rather than the types of data and how companies can and cannot use them that present risk to the customers. (Tamiu.edu )

The ethical issue that can arise during data mining and information sharing can be Privacy issue. Security of database is related very closely to privacy as it inhibits the unauthorized dissemination of personal data. I totally agree with Philarchive.org that When data can be viewed from many angles and at abstraction levels, it threatens the goal of protecting data security and guarding against the invasion of privacy.

In order to improve the visibility of data mining activities, it needs to be transparent, every bit of information that goes into algorithm and comes out of it needs to reflect its utility clearly therefore the information we use needs to be filtered ethically before it goes into data mining process. Health care personnel should be transparent on how patient data is collected and used, there needs to be some type of visibility and control on how data is collected and used. Permission should be taken prior to acting rather than asking for forgiveness later.

**Approaches and strategies**

There needs be a comprehensive legal framework for data practices, control within companies and health care organizations to protecting consumer/patient data.  Leaders should be assigned for Policy development, supervision and enforcement needs to be established in the subject matter because without proper governance legal troubles and ethical lapses are inevitable.

Data anonymization, a process of removing or modifying sensitive or identifying for data before it is analyzed can be a common method for ensuring privacy. For instance, replacing names, phone number address with random numbers or generic term. Along with data anonymization, data encryption can help maintaining privacy during data mining. Data anonymization and Data encryption will assist in protecting individuals' privacy while still enabling data analysis and sharing for research, analytics, and compliance purposes.

Another approach is data minimization, collecting or retaining only needed information. For example, we can limit the scope, frequency, or duration of our data collection activities. We can also delete or archive the data that is no longer needed or useful for your analysis. (Alam, 2023)

**References:**

Alam, M. (2023, September 29). What are the most effective methods for ensuring privacy during data mining?. How to Ensure Privacy During Data Mining. https://www.linkedin.com/advice/1/what-most-effective-methods-ensuring-privacy-during#:~:text=during%20data%20mining.-,1%20Data%20anonymization,before%20using%20it%20for%20analysis.

Data mining in the context of legality, privacy, and Ethics. (n.d.). https://philarchive.org/archive/OKODMI

The ethics of Data Mining. tamiu. (2023, December 11). https://online.tamiu.edu/programs/business/ms-information-science/ethics-of-data-mining/

**Response1:**

Hello Angeline

Thank you for the informative post. I agree that with data warehousing, big data, and data mining there are ethical questions. Privacy is one of the issues that comes causing exposure to sensitive health information.

It’s easier and more accessible to get treatment making our lives far more comfortable due to the digital health services. Healthcare industry data is regarded as being highly valuable and sensitive, therefore we need to focus on strategies to prevent this issue. Besides financial setbacks, an organization must deal with the image, brand value, and reputation of that organization due to this issue.

Therefore, preventive measures need to be prioritized by researchers, security experts, and healthcare organizations. There needs to be a discussion between Health personnel, leaders, and policymakers about the ethical implications of EHRs before the occurrence of conflicts among the ethical principles.  (Layman, 2020)

**References:**

Layman, E. J. (2020). Ethical issues and the electronic health record. Health Care Manager, 39(4), 150-161. [https://doi.org/10.1097/HCM.0000000000000302Links to an external site.Links to an external site.](https://doi.org/10.1097/HCM.0000000000000302)

**Respone2**

Hello Bernice,

Nicely done, Privacy is a serious issue that comes along with data mining therefore we need to focus more on strategies to maintain data privacy.

Privacy during data mining can be maintained via taking data consent. This means obtaining the permission or agreement of your data subjects to collect, use, or share their data for data mining purposes. Along with this, data audit can help ensuring privacy.

 For instance, we can keep track of the sources, flows, and destinations of our data. We can also measure the performance, quality, or impact of our data mining results.  Any issues, errors, or breaches that may affect our data privacy can be identified via auditing (Alam, 2023)

References:

Alam, M. (2023, September 29). What are the most effective methods for ensuring privacy during data mining?. How to Ensure Privacy During Data Mining. https://www.linkedin.com/advice/1/what-most-effective-methods-ensuring-privacy-during#:~:text=during%20data%20mining.-,1%20Data%20anonymizatio