**I chose Scenario One for my discussion post.**

**Scenario: 1**

You are working in risk management and need to track medication administration errors and adverse events for patients over a 6-month period. You are receiving information from the inpatient areas, outpatient clinics, and home health.

**Table:**

**A screenshot of a medical program

Description automatically generated**

**The rationale for my decision**

According to Harrington, to eliminate Antique Optical’s many-to-many relationships, the database designer should replace each many-to-many relationship with a composite entity, and one-to-many relationships. A relational database is limited to one-to-one or one-to-many relationships, (Harrington, 2016) The rationale for my decision to present this database is that it provides an organized and efficient way for storing and accessing data that is essential to provide accurate and timely data for patient care and to remain compliant with regulations. The table schema I presented fulfills the criteria of the relational database that represents the overall logical plan of a database. Along with this, this allows the safe storage of patient-sensitive information that is important in ensuring the privacy and security of our patients as structural factors independently and in combination with contextual factors affect patient and nurse outcomes. (Patrician et al., 2010)

**Benefits of converting the data from paper to electronic form**

Paper is still in use in every industry including health care but electronic has a lot of benefits in comparison.If we capture data using paper, there is a chance of incomplete or conflicting entries. The risk doubles during manual transcription or double entry into another system. For instance, in any organization, if they handle all their information on paper, a single employee would filter a giant stack of forms, dividing the previous day’s inspections into severe and minor problems. If that employee misses a day of work, then small or minor problems can quickly escalate into disasters. If they had been electronic, then the data entry would have been controlled with specific thresholds, preset parameters, and field validation. Real-time, automatic uploads of data into a central database will make manual transcription unnecessary. Along with this complete audit trails are easy to find and attribute to the right people going digital.

Going paper, It will take a longer time to enter and verify that the contents are accurate, and there is also no real-time visibility of what is happening, we can only access data when it is ready not even a few moments before but with electronic we have real-time data, we can access the result as soon as it flows over, for instance, we use electronic health record in our organization, we don’t have to manually record patient data such as vital signs, vent setting, it will automatically flow in epic once the data is available, we don’t have to go back and forth into the patient room just to access the information. We can access it on the computer. Electronic increases operational efficiency. If someone makes mistakes during documentation, we want to know who did this and why so that root cause analysis can be done to prevent this type of error in the future. When we work with paper it is not possible to control audit trails, user access rights, and data security, Health care is a secure field, information is very delicate, and the kind of encryption required for this level of privacy is not possible on paper. With digital capture, audit trails can be easily accessible to administrators, and can quickly pinpoint who filled out, viewed, or changed a form and when they did it. (Priest, 2023)

**References:**

Harrington, J. L. (2016a). 4. In Relational database design and implementation (4th ed., pp. 76–76). essay, Morgan Kaufmann.

Patrician, P. A., Loan, L., McCarthy, M., Brosch, L. R., & Davey, K. S. (2010). [Towards evidence‐based management: Creating an informative database of nursing‐sensitive indicatorsLinks to an external site.Links to an external site.](https://search.proquest.com/docview/822745811?account=14872). Journal of Nursing Scholarship, 42(4), 358–366.

Priest, C. (2023, October 2). 5 benefits of converting paper forms to digital forms. FORM. https://www.form.com/blog/the-5-biggest-benefits-of-moving-from-paper-to-a-digital-solution/

**Respone 1**

Hello Saumini,

Thank you for the informative post. I agree with you that Data designed to establish data relationships will improve efficiency, accuracy, and security and the table you have provided reflects a relational database that is best at maintaining data consistency across applications and database copies. The data tables provide information about related objects. Each row holds a record with a unique identifier known as a key and each column contains the attributes of the data. Each record assigns a value to each feature, making relationships between data points easy to identify. (Lutkevich & Biscobing, 2021)

 According to Oracle.com, There is a logical data structure that includes data tables, views, and indexes and they are separate from the physical storage structures so that the administrators can manage physical data storage without affecting access to that data as a logical structure

**References:**

Lutkevich, B., & Biscobing, J. (2021, June 24). What is a relational database?. Data Management. https://www.techtarget.com/searchdatamanagement/definition/relational-database

What is a relational database?. Oracle. (2020). https://www.oracle.com/database/what-is-a-relational-database/#:~:text=Benefits%20of%20relational%20database%20management%20system,-The%20simple%20yet&text=Relational%20databases%20are%20used%20to,customer%20information%2C%20and%20much%20more.

**Response 2:**

Hello Patricia,

Thank you for the post. There is no doubt that in a growing hospital organization, it is important to have a reliable database that is organized and accurate(Harrington, 2016) Nurse educators with expert-level competencies are needed for this and the level of nursing education for training professional nursing personnel needs to be improved.

With the best training and education, Nurses can ensure accurate data entry preventing observer and data entry drift as Data quality is vital, and processes must be in place and verified periodically. Education combined with Evidence-based practice integrates the best evidence from well-designed studies with the clinicians’ expertise, including internal evidence from patient assessments and practice data, and patient’s preferences and values. It also offer nurse educators opportunities to create new and enhanced educational experiences for their students (Bloomfield et al., 2014)

References:

Bloomfield, J. G., Titler, M., Anderson, T., Arnold, P., Beaudoin, M., Beer, D., Behrens, J., Bennet, S., Bergjan, M., Biddle, B. J., Childs, S., Chumley-Jones, H. S., Clark, C. E., Cook, D. A., Coomey, M., Cravener, P., Laat, M. de, Vries, B. de, Fec, … Gunawardena, C. N. (2014, April 24). The nursing educator’s role in e-learning: A literature review. Nurse Education Today.

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Harrington, J. L. (2016). The Database Environment. In Relational Database Design and Implementation (4th ed). essay, Morgan Kaufmann.