NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY

**Faculty Computing and Informatics**

Department ……

**Mobile application for accessing big data in Namibia public hospitals**

Irja Shaanika and Sinte Mutelo

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## Background & Objectives

The accessibility of healthcare big data plays a critical role for healthcare services delivery. As such healthcare big data provide insights and information that are needed to support and provide effective healthcare services. However, as healthcare big data keeps growing and increasing at a rapid pace, its accessibility have become a challenge to the patients and healthcare practitioners. Patients access their healthcare big data by physically visiting the public hospitals. This process tend to be costly as patients travel long distances to access their healthcare big data. The inability of patients to access their healthcare big data from anywhere delays medical treatments as patients are unable to share their medical files with other healthcare practitioners on time. Thus, there is a need for a mobile application that can be used for accessing and sharing healthcare big data across the Namibia public hospitals.

## Method

This study employed semi-structured interviews to collect qualitative data. Data was collected from two public hospitals and Windhoek Community members. Data was interpretively analysed. Based on the analysis, a model was developed. Through the use of the model, mobile application can be developed that will help improve big data accessibility across the public hospitals.

The table below shows the unit of analysis from which data was collected.

| Participants | Public hospital 1 | Public hospital 2 |
|---|---|---|
| Pharmacists | 3 | 2 |
| Nurses | 2 | 1 |
| Doctors | 1 | 0 |
| Data clerks | 4 | 2 |
| IS specialists | 2 | 2 |
| Total | 12 | 7 |
| A total of 5 community members were interviewed | | |

## Results

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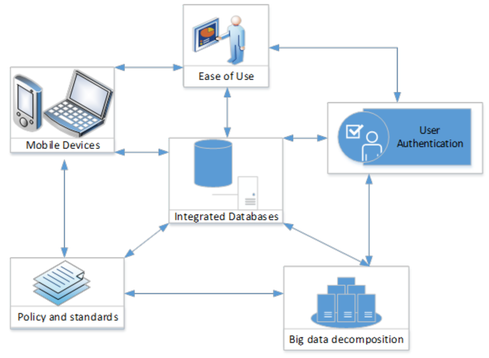


## Conclusion

The use of mobile applications for accessing and sharing healthcare big data across public healthcare practitioners and patients enables timely decision-making and reduces travelling costs that are mostly incurred by patients. However, the reliability and effectiveness of such a mobile application dependents on various factors such as regulating policies and user privacy enforcements. Thus, this study developed a model that can be used as a guide in the development of healthcare mobile applications. Further studies can be employed to assess the effectiveness of the model.

## References:

Grover, V., Chiang, R. H., Liang, T. P., & Zhang, D. (2018). Creating strategic business value from big data analytics: A research framework. Journal of Management Information Systems, 35(2), 388-423

Trifirò, G., Sultana, J., & Bate, A. (2018). From big data to smart data for pharmacovigilance: the role of healthcare databases and other emerging sources. Drug safety, 41(2), 143-149.

Thota, C., Manogaran, G., Lopez, D., & Sundarasekar, R. (2018). Architecture for big data storage in different cloud deployment models. In Handbook of Research on Big Data Storage and Visualization Techniques (pp. 196-226). IGI Global. Wang, H., Liu, W., & Soyata, T. (2014). Accessing big data in the cloud using mobile devices. In Handbook of Research on Cloud Infrastructures for Big Data Analytics (pp. 444-470). IGI Global.