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# Data-Driven Healthcare: Evaluating the Effectiveness of the Patient Record Management System at RHU-Del Carmen

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**Abstract:** This paper delves into the transformative potential of data-driven approaches in healthcare and evaluates the implementation and impact of the Patient Record Management System (PRMS) at RHU-Del Carmen. The study aims to streamline healthcare operations, enhance data accessibility, and promote evidence-based decision-making. Through a comprehensive evaluation with an overall score of 4.4 out of 5, the study highlights the system's effectiveness in improving patient care, optimizing care coordination, and providing valuable clinical insights. The findings affirm the significance of data-driven healthcare practices and emphasize the importance of leveraging patient data for enhanced healthcare outcomes, ultimately driving towards a patient-centric and data-enabled healthcare system.

**Keywords:** Data-driven, evaluation, healthcare, patient record, management system

### REFERENCES

- [1]. Reyna, A.C. (2023), "Design and Development of Barangay Health Information System using Google Maps", International Journal of Advanced Research in Science, Communication and Technology, 3(2) July 2023, Pages: 298-305
- [2]. Siau, K. (2003). Health care informatics. IEEE Transactions on Information Technology in Biomedicine, 7(1), 1-7.
- [3]. Semantha, F. H., Azam, S., Shanmugam, B., Yeo, K. C., & Beeravolu, A. R. (2021). A conceptual framework to ensure privacy in patient record management system. IEEE Access, 9, 165667-165689.
- [4]. Ommaya, A. K., Cipriano, P. F., Hoyt, D. B., Horvath, K. A., Tang, P., Paz, H. L., ... & Sinsky, C. A. (2018). Care-centered clinical documentation in the digital environment: solutions to alleviate burnout. NAM Perspectives.
- [5]. Foad, M., Rafa, I. S., & Navid, S. R. A. (2018). Intelligent medical data recording & management system (Doctoral dissertation, BRAC University).
- [6]. Cerchione, R., Centobelli, P., Riccio, E., Abbate, S., & Oropallo, E. (2023). Blockchain's coming to hospital to digitalize healthcare services: Designing a distributed electronic health record ecosystem. Technovation, 120, 102480.
- [7]. Yogesh Kumar Jha, Y. (2023). Development of a Centralized Electronic Medical Record System–in HealthCare & Governance. Development of a Centralized Electronic Medical Record System–in HealthCare & Governance (June 12, 2023).
- [8]. Yu, W., Liu, Q., Zhao, G., & Song, Y. (2021). Exploring the effects of data-driven hospital operations on operational performance from the resource orchestration theory perspective. IEEE Transactions on Engineering Management.
- [9]. Gotz, D., & Borland, D. (2016). Data-driven healthcare: challenges and opportunities for interactive visualization. IEEE computer graphics and applications, 36(3), 90-96.
- [10]. Cai, Q., Wang, H., Li, Z., & Liu, X. (2019). A survey on multimodal data-driven smart healthcare systems: approaches and applications. IEEE Access, 7, 133583-133599.

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- [11]. Muni Kumar, N., & Manjula, R. (2014). Role of Big data analytics in rural health care-A step towards svasth bharath. International Journal of Computer Science and Information Technologies, 5(6), 7172-7178.
- [12]. Dash, S., Shakyawar, S. K., Sharma, M., & Kaushik, S. (2019). Big data in healthcare: management, analysis and future prospects. Journal of big data, 6(1), 1-25.
- [13]. Shivade, C., Raghavan, P., Fosler-Lussier, E., Embi, P. J., Elhadad, N., Johnson, S. B., & Lai, A. M. (2014). A review of approaches to identifying patient phenotype cohorts using electronic health records. Journal of the American Medical Informatics Association, 21(2), 221-230.
- [14]. Firouzi, F., Farahani, B., Barzegari, M., & Daneshmand, M. (2020). AI-driven data monetization: The other face of data in IoT-based smart and connected health. IEEE Internet of Things Journal, 9(8), 5581-5599.
- [15]. Johnson, M., Jain, R., Brennan-Tonetta, P., Swartz, E., Silver, D., Paolini, J., ... & Hill, C. (2021). Impact of big data and artificial intelligence on industry: developing a workforce roadmap for a data driven economy. Global Journal of Flexible Systems Management, 22(3), 197-217.
- [16]. Weiner, J., Balijepally, V., & Tanniru, M. (2015). Integrating strategic and operational decision making using data-driven dashboards: the case of St. Joseph mercy Oakland hospital. Journal of Healthcare Management, 60(5), 319-330.
- [17]. Feldman, J., Barshi, I., Degani, A., Loukopoulou, L., & Mauro, R. (2017). Designing Flightdeck Procedures: Literature Resources (No. ARC-E-DAA-TN39832).
- [18]. Carreiro, M. A. (2023). Patient Relationship Management (PRM) and AI: The role of Affective Computing (Doctoral dissertation).
- [19]. Alabdulatif, A., Khalil, I., & Saidur Rahman, M. (2022). Security of Blockchain and AI-Empowered Smart Healthcare: Application-Based Analysis. Applied Sciences, 12(21), 11039.
- [20]. Siau, K. (2003). Health care informatics. IEEE Transactions on Information Technology in Biomedicine, 7(1), 1-7.
- [21]. Lee, H. K., Jin, R., Feng, Y., Bain, P. A., Goffinet, J., Baker, C., & Li, J. (2018). An analytical framework for TJR readmission prediction and cost-effective intervention. IEEE journal of biomedical and health informatics, 23(4), 1760-1772.
- [22]. Li, L., Novillo-Ortiz, D., Azzopardi-Muscat, N., & Kostkova, P. (2021). Digital data sources and their impact on people's health: a systematic review of systematic reviews. Frontiers in Public Health, 9, 645260.
- [23]. Muramira, A., & Nkurunziza, J. (2022). A data-driven model to predict a household's capacity to graduate. Case of USAID/Twiyubake Program.
- [24]. Rubio-Largo, A. Data Driven Computational Intelligence for Scientific Programming.
- [25]. Guha, B., Moore, S., & Huyghe, J. M. (2023). Conceptualizing data-driven closed loop production systems for lean manufacturing of complex biomedical devices—a cyber-physical system approach. Journal of Engineering and Applied Science, 70(1), 50.
- [26]. Hiller, J. S. (2016). Healthy Predictions: Questions for Data Analytics in Health Care. Am. Bus. LJ, 53, 251.
- [27]. Kaw, J. A., Gull, S., & Parah, S. A. (2022). SVIoT: A Secure Visual-IoT Framework for Smart Healthcare. Sensors, 22(5), 1773.
- [28]. Kouroubali, A., & Katehakis, D. G. (2019). The new European interoperability framework as a facilitator of digital transformation for citizen empowerment. Journal of biomedical informatics, 94, 103166.

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