International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2020): 7.803

Better Provider Data Management to Improve Referrals

Gokul Ramadoss

Email: *gokul1248[at]gmail.com*

Abstract: ***This study evaluates Healthcare Provider Data Management (PDM) options. Credential accuracy, operational efficiency, regulatory compliance, and financial success are priorities. Studies use secondary research from secondary sources. Excellent PDM systems promote patient safety, efficiency, CMS compliance, and financial benefits. The paper suggests using new technologies and teaching personnel to enhance PDM. It also suggests studying how new technology affects PDM systems.***

Keywords: Healthcare, Provider Data Management, efficiency, compliance, financial performance, regulatory requirement

1. Introduction

Healthcare companies use Provider Data Management (PDM) technologies, services, and processes to gather, organize, and manage service provider data [1]. When a licensed healthcare practitioner joins the company, the company uses this information for various purposes. This strategy trains doctors to treat patients [5]. The need to update certain credentials necessitates the continuation of credentialing [3].

Incorrect credentialing or credentialing data may enable untrained professionals to treat patients, endangering consumers and providers [2]. CMS now penalizes erroneous network contact information, which may anger patients. Incorrect case information may result in labor costs or denials [6]. In order to file claims and receive payment, workers must provide accurate information. The service location, NPI, account, and W9 information are typical. Usually, suppliers or office staff give this information [10]. Since provider data is changeable and some is constant, managing it is tough. No reliable source supplies this information, making it challenging to handle [11]. The provider offers data and prioritizes patient care above paperwork. This could lead to costly source information errors [3].

a) Significance of the study

This study is important because healthcare provider data management (PDM) affects patient safety and efficiency. Patient safety and care quality rely on PDM training and qualifying healthcare workers. As healthcare organizations utilize more technology, services, and processes to handle provider data, accuracy and completeness are essential. Using erroneous credentialing data puts patients and organizations at risk of contracting unqualified practitioners. Legal and financial difficulties, including CMS penalties, may ensue. This study show how well PDM systems decrease these risks, adding to discussions about healthcare service and organization strength.

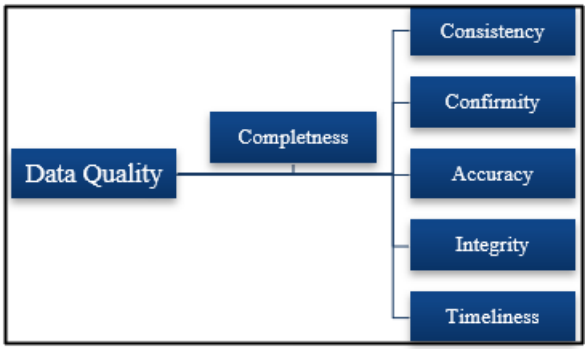

Figure 1: Data Quality

b) Problem statement

As healthcare evolves, we must re-credential doctors. If provider data is outdated, untrained staff may treat patients, which is dangerous and harms healthcare companies' reputations [12]. Healthcare companies struggle to thrive because CMS fines them heavily for erroneous network information data [3]. Incorrect data might cause claims denials and administrator overtime, costing money [15]. Although accurate provider data is crucial, many healthcare organizations struggle to update and manage it, indicating PDM difficulties. This research examines how PDM systems increase provider licensing data quality and dependability, reducing risks and improving organization performance.

2. Literature review

Many healthcare processes seem to be "data-driven." Healthcare collects data faster than any other industry, and modern analytics technologies help clinicians make the best choices [13]. This data is useful for diagnosis, therapy, and illness progression. Except for referrals, IT adoption is trending. Doctors regularly refer patients from general practitioners to specialists in the same manner they did over a century ago [20]. Doctors are referred to base on their expertise and connections with experts. The advice is driven by health plan network constraints and patients' reluctance to pay more for out-of-network treatment [21].

a) Value-Based Care Adds Referral Complexity

The research revealed that US State-Referral errors may indignant patients [13]. Since value-based care payment models are common and repayment relies on pricing, leads are vital to a business's profits. About two-thirds of healthcare

companies seek VBPs. An expert with higher fees and poorer performance may raise ACO end-of-year charges [22, 25]. ACOs may analyze cost, quality, outcome, and other data to assist referral doctors in enhancing their performance and reducing costs [7]. The ACO, or health system, may use cost and outcome information to help the doctor increase referrals, quality, and revenue [8].

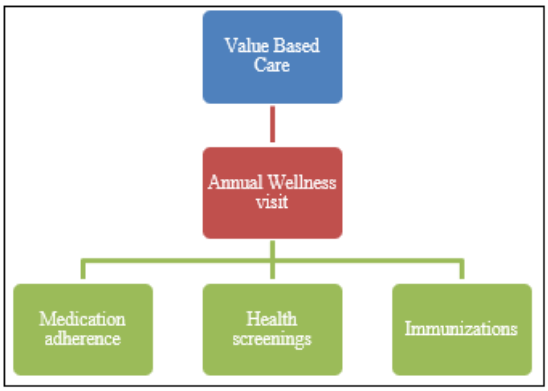

Figure 2: Value-Based Care

b) Data-Driven Referral Decision

This data collected and analyzed automatically using population health management technologies [6]. It may then provide each recommendation network doctor with a numerical score based on patient and doctor performance across several quality and cost parameters [4, 28]. Sending doctor and patient have never dealt with the referral partner before, a simpler process may save time and make things clearer [21]. These community health management systems allow referring providers to refer patients to additional doctors. This may balance plans and reduce appointment wait times [22].

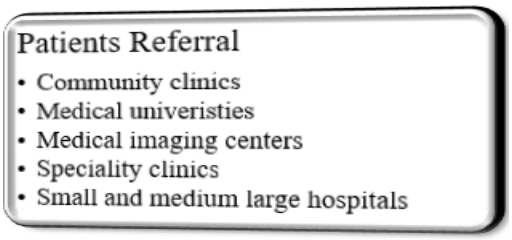

Figure 3: Patient Referral

c) Optimizing Referral Networks

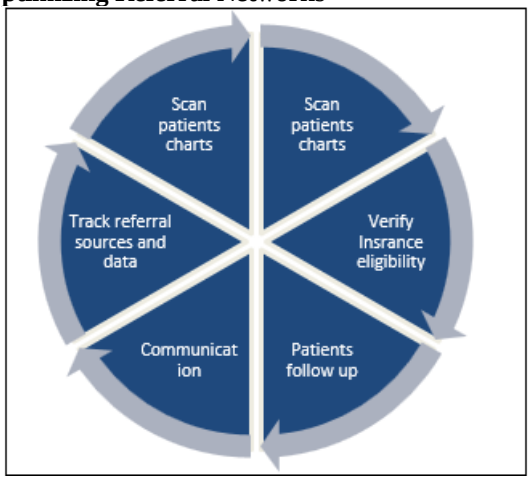

Figure 4: Referral Management

Doctors' professional relationships remain after using data analytics to inform referral choices [23]. In fact, researching further into the referral doctor's work might strengthen these ties by supporting their subjective or personal impression of their colleague's image [25]. As long as the outcomes are favorable, the doctor who submitted the patient feel better about referring future patients to the reference practice or hospital [26, 27].

3. Materials and Methods

This study revealed revamping state Secondary research, or desk research, involves combining data from many sources. This may include in-house research or government data, professional organizations, and the internet. This study used secondary data sources from google scholar. Peer-review based research articles were used to analyzed the provider data management in health care.

c) **Design**

This secondary research study analyzes how Provider Data Management (PDM) in healthcare organizations using current data and material helps them. Secondary research makes finding plenty of data simpler. This helps you analyze the problem without primary data. This method is suitable for PDM system evaluation since it uses research publications.

d) **Data Sources**

Peer-reviewed studies were used from reputable journals explain PDM, licensing procedures, and the hazards of inaccurate provider data.

e) **Data Analysis**

Qualitative analysis uses secondary sources. This technique demonstrates the healthcare PDM system's effectiveness by identifying themes and patterns. The investigation also assesses the organization's size, healthcare services, and legislation.

4. Results

Healthcare firms require powerful Provider Data Management (PDM) solutions. PDM systems that are properly designed may assist keep accurate provider data. Patient care must be provided by qualified personnel. This accuracy greatly decreases licensing mistakes, preventing inexperienced practitioners from treating patients and exposing healthcare organizations to legal and financial risks. Research demonstrates that healthcare companies with strong PDM systems have less regulatory penalties and claim rejections. This is especially true for incorrect CMS-required network directory data. PDM is essential for patient safety, efficiency, and compliance.

5. Findings and Discussion

This study shows how healthcare companies' provider data management (PDM) systems influence routine and strategic areas [29]. Credentialing providers, corporate operations, compliance with laws, and financial success are key PDM system concerns [2]. These issues show that healthcare organizations require robust PDM systems for smooth and safe operations.

Theme 1: Provider Credentialing

Correcting provider credentials is essential for patient safety and the organization's image [30]. To prevent unqualified treatment, simple provider credential verification with effective PDM systems is required. Many studies have demonstrated that licensing mistakes can harm patients and put hospitals at risk of litigation [13]. Healthcare organizations may reduce these risks by maintaining correct provider data and restricting access to approved physicians [14]. This emphasizes the need for PDM systems with high standards and compliance.

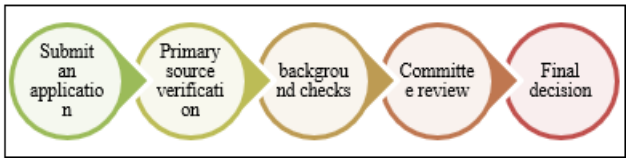

Figure 5: Medical Credentialing Process

Theme 2: Operational efficiency and administrative reduction.

Strong PDM systems simplify licensing and reduce provider data administration, boosting company efficiency [29]. A study reveals healthcare organizations with well-integrated PDM systems had fewer licensing delays and mistakes. The system simplifies new provider enrollment and contract renewal [16]. Efficiency saves money by minimizing the laborious provider data management. Healthcare staff may focus on patient care and other important tasks because they work less frequently [15].

Theme 3: Issue in regulatory compliance.

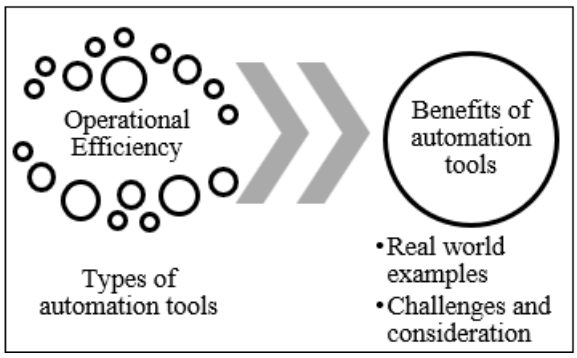

Figure 6: Operational efficiency

High-end PDM systems help healthcare organizations meet CMS provider list data requirements [17]. Breaching these restrictions could result in severe penalties and reputational damage for the company. The study concluded that PDM systems assist firms in avoiding financial and image issues and preserving good government relations [18]. This focuses on how PDM systems help healthcare organizations manage compliance and risk.

Theme 4: Business Impact

Finally, PDM systems greatly affect healthcare organizations' finances [11]. Erroneous source data may delay refunds and reject claims, costing income [19]. By checking provider data, PDM systems eliminate losses and improve revenue cycle management. PDM systems decrease noncompliance fines, enabling healthcare businesses to stay profitable [21]. Regulatory compliance and financial performance may benefit the economy through PDM system investment [16].

6. Conclusion

Healthcare firms use PDM technology to improve operations, comply with legislation, and increase profits. The findings suggest that precise and updated provider data prevents unsuitable healthcare providers from functioning, saving individuals and organizations legal and financial trouble. The research found that good PDM systems simplify everyday activities, improve healthcare personnel's responsibilities, and save money. PDM helps firms comply with CMS and other requirements. It prevents penalties and maintains a reputation. Investment in PDM boosts the economy. These stabilize budgets and eliminate refused claims, penalties, and revenue losses. Finally, contemporary healthcare firms need excellent PDM systems. They depend on care, efficiency, and long-term financial success.

7. Research Limitations and Future Work

Healthcare firms should invest in AI and machine learning to automate and improve licensing procedures. This enhances provider data management (PDM) systems. To maintain data management standards, staff should receive frequent PDM best practices training. Future studies may examine how integrating block chain technology into PDM systems improves data security and transparency. It might also examine how PDM systems affect patient outcomes in various healthcare settings.

References

[1] Al-Agba, N., & Bernard, R. (2020). Patients at risk: The rise of the nurse practitioner and physician assistant in healthcare. Universal-Publishers.
[2] Back, A. L., Fromme, E. K., & Meier, D. E. (2019). Training clinicians with communication skills needed to match medical treatments to patient values. Journal of the American Geriatrics Society, 67(S2), S435-S441.
[3] 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.
[4] Elshayib, M., & Pawola, L. (2020). Computerized provider order entry–related medication errors among hospitalized patients: An integrative review. Health Informatics Journal, 26(4), 2834-2859.
[5] Farsi, D. (2021). Social media and health care, part I: literature review of social media use by health care providers. Journal of medical internet research, 23(4), e23205.
[6] Flihan, N. A. (2018). Electronic Crime in Healthcare (Master's thesis, Utica College).
[7] Haataja, A. (2020). Implementation of a product data management system (Master's thesis, A. Haataja).
[8] Herd, P., & Moynihan, D. (2021). Health care administrative burdens: Centering patient experiences. Health services research, 56(5), 751.
[9] Hsiang, E. Y., Breithaupt, A. G., Su, P., Rogers, A. T., Milbar, N., & Desai, S. V. (2018). Medical student healthcare consulting groups: a novel way to train the

next generation of physician-executives. Medical teacher, 40(2), 207-210.
[10] Hulsen, T. (2021). Challenges and solutions for big data in personalized healthcare. In Big Data in Psychiatry# x0026; Neurology (pp. 69-94). Academic Press.
[11] Ikegwu, A. C., Nweke, H. F., Anikwe, C. V., Alo, U. R., & Okonkwo, O. R. (2022). Big data analytics for data-driven industry: a review of data sources, tools, challenges, solutions, and research directions. Cluster Computing, 25(5), 3343-3387.
[12] Ikola, A. (2018). Developing master data management in a multi-business case organization (Master's thesis).
[13] Kalid, N., Zaidan, A. A., Zaidan, B. B., Salman, O. H., Hashim, M., & Muzammil, H. J. J. O. M. S. (2018). Based real time remote health monitoring systems: A review on patients prioritization and related" big data" using body sensors information and communication technology. Journal of medical systems, 42, 1-30.
[14] Karatas, M., Eriskin, L., Deveci, M., Pamucar, D., & Garg, H. (2022). Big Data for Healthcare Industry 4.0: Applications, challenges and future perspectives. Expert Systems with Applications, 200, 116912.
[15] Koreff, J., Weisner, M., & Sutton, S. G. (2021). Data analytics (AB) use in healthcare fraud audits. International Journal of Accounting Information Systems, 42, 100523.
[16] Lintern, G., & Motavalli, A. (2018). Healthcare information systems: the cognitive challenge. BMC medical informatics and decision making, 18, 1-10.
[17] Mattila, S. (2018). Product information management challenges in B2B e-commerce: a case study in spare parts business (Master's thesis).
[18] Pramanik, P. K. D., Pal, S., & Mukhopadhyay, M. (2022). Healthcare big data: A comprehensive overview. Research anthology on big data analytics, architectures, and applications, 119-147.
[19] Preis, S. J. (2021). Analysis and evaluation of the impacts of predictive analytics on production system performances in the semiconductor industry (Doctoral dissertation, University of Gloucestershire).
[20] Rehman, A., Naz, S., & Razzak, I. (2022). Leveraging big data analytics in healthcare enhancement: trends, challenges and opportunities. Multimedia Systems, 28(4), 1339-1371.
[21] Salmon, J. W., & Thompson, S. L. (2020). The corporatization of American health care: The rise of corporate hegemony and the loss of professional autonomy. Springer Nature.
[22] Sarzynski, E., Ensberg, M., Parkinson, A., Fitzpatrick, L., Houdeshell, L., Given, C., & Brooks, K. (2019). Eliciting nurses' perspectives to improve health information exchange between hospital and home health care. Geriatric Nursing, 40(3), 277-283.
[23] Sbaffi, L., Walton, J., Blenkinsopp, J., & Walton, G. (2020). Information overload in emergency medicine physicians: a multisite case study exploring the causes, impact, and solutions in Four North England national health service trusts. Journal of medical Internet research, 22(7), e19126.
[24] Shah, N. A., Jue, J., & Mackey, T. K. (2020). Surgical data recording technology: a solution to address medical errors?. Annals of surgery, 271(3), 431-433.
[25] Sodhro, A. H., Pirbhulal, S., & Sangaiah, A. K. (2018). Convergence of IoT and product lifecycle management in medical health care. Future generation computer systems, 86, 380-391.
[26] Subrahmanya, S. V. G., Shetty, D. K., Patil, V., Hameed, B. Z., Paul, R., Smriti, K., ... & Somani, B. K. (2022). The role of data science in healthcare advancements: applications, benefits, and future prospects. Irish Journal of Medical Science (1971-), 191(4), 1473-1483.
[27] Vikash, B. S. (2022). Exploring Challenges Faced by Information Technology Security Managers in Implementing Risk Management Framework to Protect Protected Health Information and Personally Identifiable Information (Doctoral dissertation, Northcentral University).
[28] Wang, Y., Kung, L., & Byrd, T. A. (2018). Big data analytics: Understanding its capabilities and potential benefits for healthcare organizations. Technological forecasting and social change, 126, 3-13.
[29] Webb, S. (2021). Hardening the Healthcare Industry Against Ransomware Attacks (Master's thesis, Utica College).
[30] Zohuri, B., & Behgounia, F. (2021). Artificial Intelligence and High Performance Data-Driven Medicine. Aditum Journal of Clinical and Biomedical Research, 1(1).