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RESEARCH ARTICLE

DIGITALIZATION OF PRIVATE HOSPITALS AND EFFECTS ON THE ACCOUNTING SYSTEM

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ABSTRACT

The study focuses on the digitalization of selected private hospitals in the Philippines and the effects of digitalization on their accounting system. The specific objectives are: to determine the status of digitalization among the participant hospitals, identify and analyze the particular challenges hindering the digitalization of the hospital's accounting systems, identify the advantages gained from the digitalization of hospital accounting systems, and recognize the specific enhancements brought about by digitalization of the hospital accounting systems. This is qualitative research. Information was gathered from an open-ended survey questionnaire. The study's respondents were 15 healthcare employees of 4 private hospitals, including IT personnel, an Accounting Head, an HR officer, an Executive Secretary, a Medical Director, a Finance Officer, Accountants, a Medical Director's Office secretary, and a Medical Arts Building secretary. Challenges in digitalization include Slow filing of patient profiles/slow progress or transition, slow filing of patient profiles/slow progress or transition, slow internet connection, HMO accreditation, slow transfer of lab results from the main branch, and doubling recording. Advantages of the accounting system are faster processing of transactions, improved accuracy of financial records, better integration with other hospital systems, enhanced security of financial data, and streamlined billing and invoicing processes. Proper cost-benefit analysis is recommended at the level of the individual institutions as well as that of the greater Philippine Health System which operates on the background of the Universal Health Care Law. Ensuring a context-specific and appropriate transition is crucial for reaping the benefits of advancements in technology, especially in the healthcare sector.

KEYWORDS

Digitalization, impact of digitalization, private hospitals, accounting system, Phil. Health system

1. INTRODUCTION

The focus of the study is the digitalization of selected private hospitals in the Philippines and the impact of digitalization on its accounting system. The specific objectives are: to determine the status of digitalization among the participant hospitals, identify and analyze the specific challenges hindering the digitalization of the hospital's accounting systems, identify the advantages gained from the digitalization of hospital accounting systems, and recognize the specific enhancements brought about by digitalization of the hospital accounting systems.

The digitalization of Philippine hospitals is relatively new and advancements were mostly done during the COVID-19 pandemic when digital healthcare, digital medicine, and digital therapeutics were in demand. During this time, hospitals realized that their current operations, which relied mostly on face-to-face interactions, were not sustainable in the face of the pandemic and that innovations were needed to ensure that patients could still be treated despite the distance. These innovations ranged from improvements in service delivery, access to information, supply of commodities, and more.

2. METHODOLOGY

2.1 Research Design

A qualitative-quantitative study was conducted during the first quarter of 2024 utilizing self-administered survey questionnaires to determine the impact of digitalization of the accounting system in four (4) private hospitals and. Respondents were purposively selected based on the network of connections readily available to the researchers. The study gathered data from 15 healthcare employees of the 4 private hospitals, which included IT personnel, the Accounting Head, the HR officer, the Executive Secretary, the Medical Director, the Finance Officer, the Accountants, the secretary of the Medical Director's Office, and Medical Arts Building secretary. Names of the hospitals and diagnostic clinics were omitted by the requests of the respondents.

3. LITERATURE REVIEW

3.1 Status of Digitalization in Hospitals

For the past several years, there has been a move to incorporate information technology and other digital solutions into hospital and healthcare systems (Kumar, 2009). The level of digitalization in healthcare varies across the world and may depend on national institutions, government support, and the management of these healthcare facilities. For example, countries such as the United States have made advancements in telemedicine and health IT; artificial intelligence is being used to manage digital health records as well as hospital systems in general. The use of AI has been extended as well to diagnosing, imaging, and assisting in decision-making for doctors and patients (Ayo-Farai et al., 2023).

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In the Philippines, there are moves within the public and private sectors to incorporate IT into health services though some barriers remain. Private institutions have adopted digital systems into their operations, and telemedicine applications have become available on mobile devices. The Department of Health has, with the help of international tech companies, created the National Health Facility Registry, an online database for healthcare establishments throughout the country. In addition, the pandemic has led the DOH to adopt a similar registry for COVID-19 vaccination records. However, bills that may support the move to digital across the whole health sector have yet to be passed into law (US Department of Commerce International Trade Administration, 2022).

A big change that occurred among hospitals would be the synergistic incorporation of Telemedicine to adjunct existing healthcare treatment. Many hospitals struggled with giving out consultations during the pandemic since this part of patient treatment heavily relied on real-life patient interaction. Initial efforts were made through personal efforts by the physicians themselves via setting up personal online calls with their patients through the aid of their secretary (Cordero, 2022). In time, hospitals were able to adapt and build a more standardized and efficient way of conducting telemedicine. For example, Cisco Philippines created Cisco Webex, a video conferencing platform used by hospitals and the Philippine Health Department to help make teleconsultations easier. Around 100,000 patients were serviced in the first quarter of its release in 2021. Moreover, House Bill No. 7422 entitled "The Philippine E-Health and Telemedicine Development Act of 2020" was made to help expand telemedicine in the country so that health and medical services can better be delivered through information and communication technology (Cordero, 2022).

Another technological innovation made was the use of Electronic Medical Records (EMRs) in hospitals. EMRs are software essentially used by physicians and other involved departments to have easy access to up-to-date patient information such as health history, diagnoses, referrals, laboratory requests and results, prices of medicine, and other services purchased by the patient (Kumar et al., 2023). EMRs are also especially useful for hospital departments due to features that aid in the accounting, administration, and scheduling systems (Honavar, 2020).

The use of EMR gained popularity during the pandemic which allowed a transition from paper-based systems across different departments to one that is more technology reliant. Transitioning to EMR was not easy, with some hospitals taking as long as 14 months until even a partial transition was achieved (Montemayor, 2019). Other factors such as lack of skilled manpower, internet connectivity, financing issues and personal preference led to the future difficulty in integrating EMR into existing hospital systems (Acacio-Claro et al., 2022).

Finally, another technological innovation made was to address the difficulty in the supply of commodities such as medicine. This led to the rise of digital health apps that function as a common hub for consultations, medicine delivery, diagnostics, and home care for patients. An example of this would be KonsultaMd, an online and downloadable app that combines the benefits of telemedicine and the delivery of medicines and other medical supplies to one's home. Patients requiring certain medications but are unable to visit a pharmacy may make use of KonsultaMD and order their medical needs to be delivered straight to their door (KonsultaMD n.d,). Certain medical services may also be arranged to be done in the comfort of one's home. These, along with the benefits of telemedicine, were brought about due to technological innovation and have greatly helped supply patients with much-needed commodities despite the pandemic.

3.2 Challenges in the Digitalization of Hospitals

In the rapidly evolving landscape of global healthcare, the integration of technology has emerged as a powerful tool. While the use of technology has proven its potential and has been demonstrated to enhance the accessibility of healthcare services and address systemic issues, its adoption and implementation into the Philippine healthcare setting has encountered significant barriers leading to its limited use and acceptance (Ong et al., 2022).

3.3 Technology Barriers

In the Philippines, the technology barriers identified were noted to be related to the complexity of the new technology system, weak infrastructure, and poor interface design of the EMR systems (Ong et al., 2022). Due to the complexity of the technology being used, medical professionals typically encounter a learning curve upon initial usage; this is supported by training needs analysis reports that have revealed a deficiency in skills among healthcare providers. This problem was also highlighted in the findings of Ben-Assuli wherein he stated that the overall technological readiness of a hospital is crucial for successful implementation and that factors like inadequate computer training and familiarity with the system often hinder the fulfillment of digitalization. The complexity of the EMR systems also affects the implementation process because it not only alters the healthcare management flow, but can also lead to major changes within the institution itself (Ilie et al., 2009).

As for the weak infrastructure noted, this pertains to the instability of the technological resources and architecture being utilized within these medical institutions. In the study conducted by Ong and his peers, their focus group discussions indicated that the technology resources present within institutions are insufficient to ensure smooth operation of the healthcare information system, and this frequently leads to system shutdowns and errors. Lastly, interface design remains to be an essential aspect of technological products because, given an operative interface design, this can effectively facilitate faster operations and data retrieval. As mentioned in the same focus group discussion, many clinicians believe that current EMR systems are ill-equipped to handle the operational demands within hospitals and in the healthcare setting.

3.4 Organizational Barriers

At the organizational level, the main barriers that are present relate to the users, particularly their level of resistance to implementation and their lack of skill regarding the new technology (Ong et al., 2015). This is supported by the findings of wherein physicians' resistance to change is one of the most prevalent barriers to the adoption of EMR systems (Derecho et al., 2024). In the realm of new technologies, physicians are typically eager to conform to new technological advancements; however, when it comes to the use of EMRs, there seems to be some reluctance. It was shown that physicians working in both the inpatient and outpatient setup have adoption rates that remained relatively low at 5% and 30%, respectively. On the other hand, the lack of skill among workers was also noted to be a challenge faced in digitalizing the hospital. According to the eHealth strategy outlined by the World Health Organization (WHO), insufficient IT proficiency and limited integration of information and communications technology (ICT) within healthcare institutions stand to be a significant obstacle to the adoption of eHealth initiatives (Ongkeko et al., 2016). In addition to this, the lack of knowledgeable IT staff within the immediate vicinity compromises the adoption of technology.

3.5 Environmental Barriers

The environmental barriers considered to be challenges in the Philippines consist of the external factors that organizations typically consider before pushing through with digitizing their medical records and processes. These included the issue of privacy regulation compliance and medical school orientation (Jamaludin et al., 2023). One of the current problems noted in this regard is the lack of protective policies and guidelines from the government. As evidenced by the National Privacy Commission status reports, healthcare practitioners experience further inconvenience due to the added responsibility of having to ensure the privacy of medical records. Aligned with this, another challenge faced by practitioners is how these digital processes and the use of EMRs were not part of their instruction back in medical school. Thus, they must rely on either their in-house IT staff or they have to learn these matters from scratch by themselves (Ong et al., 2015).

3.6 Status of hospital digitalization

Throughout the adoption of information technology in healthcare, there have been discussions regarding what constitutes successful integration of digital methods. Such discussion has led to the concept of digital maturity, a subjective measure of how well hospitals improve their performance through IT, particularly concerning integrating data and processes. In analyzing the perceived digital maturity and its effect on the usage intensity of IT in Swiss hospitals, Mettler and Pinto found that while investments in digital infrastructure such as hardware and software might increase perceived digital maturity, investing in maintenance and operations did not necessarily increase this perception (Mettler and Pinto, 2018). Mettler and Pinto interpreted that this could mean that operations important to keeping the IT systems running might be overlooked in favor of more visible signs of digitalization, such as mandating a transition from paper to digital methods. It was noted, however, that this increase in perceived digital maturity led to increased usage intensity. Even if their understanding of digital maturity was not as thorough, healthcare workers would likely embrace the use of IT because of the more obvious changes and improvements.

Mettler and Pinto cautioned that the perceived digital maturity of a

healthcare facility could change over time and with it the usage intensity (Mettler and Pinto, 2018). Factors that could decrease the perceived DM include the introduction of newer applications, the perceived lack of innovation in the existing technology, and the increase of digital natives in the workforce who might have different expectations about health IT compared to older healthcare workers. In the United States, there has been a rising trend for patients opting to use more outpatient services than inpatient ones. This trend was attributed to technological advances within healthcare and hospital settings. Trends mentioned in digitalization lean towards increasing the efficiency of access to information from records as well as increasing efficiency in relaying information to patients (Gerhardt and Arora, 2020). In digitalizing the outpatient system, prioritizing easier access to information for healthcare workers and easier access to services for patients, there is hope that the delay in healthcare delivery will decrease and the red tape that can surround manual processes that have traditionally ruled hospitals and other healthcare facilities will be removed.

In the United Kingdom, there was a greater push for a more remote method of healthcare delivery due to the COVID-19 pandemic (Ngonidzashe and Kumar, 2023). Even after the strict lockdown implementation was over, the need for telemedicine was apparent. The global pandemic revealed many holes in the overall quality of healthcare and its accessibility–or rather its inaccessibility–to the public. Other reasons cited for the increasing usage of telemedicine and other forms of digitalization were reported in a study done by Brown and colleagues. They noted environmental, economic, and clinician sustainability as prime driving factors to developing a more digitized system within hospitals. In using telemedicine, there is less need for patients to travel to healthcare facilities physically, which can reduce an individual's carbon footprint. Less time in the physical space could also mean less time used to travel, requiring less time away from work, leaving more opportunity to contribute to the Gross Value Added. For clinician sustainability, having a more digitalized healthcare environment and enhancing work efficiency, can prevent further professional burnout from occurring. The shift from a purely physical mode of healthcare delivery to a more hybrid setup is becoming more and more in demand due to the changing environment and needs of the healthcare system and its constituents.

3.7 Digitalization of hospital accounting system

The digitalization of hospital accounting systems represents a pivotal shift in the way healthcare institutions manage their financial operations. The introduction of healthcare information systems is regarded as one of the foundational steps in digital transformation which paved the way for the integration of digital technologies into the accounting system (Gavrilov, 2020).

3.7.1 Information and Communication Technology within the Hospital Accounting System

The digitalization of the hospital accounting system can be thought of as a component of Information and Communication Technology (ICT)-based solutions that hospitals adopt to increase their performance both in terms of quality improvement and cost rationalization. In a study it was stressed that the healthcare industry is not an exception to the utilization of ICT in today's information-intensive economy despite the glaring hesitation of institutions to initiate digitalization efforts. (Gastaldi et al., 2012). This is understandable as the shift towards a digitalized healthcare ecosystem is an endeavor requiring a streamlined approach among all departments, the readiness of human resources, and adequate funding, among many others.

ICT-driven innovations cut across the various operations of hospitals from service delivery to security, dematerialization of clinical documents, electronic medical records, and even drug management systems, so the sheer amount and costs of preparation, implementation, maintenance, and improvement of these systems deter many institutions from adopting it. This is especially true in the local setting of the Philippines where the healthcare system is characterized by rising cases of non-communicable diseases, high costs of accessing health services, high out-of-pocket payments, weak health information systems/governance, uneven distribution of PhilHealth accredited providers, uneven distribution of healthcare workers, and even uneven distribution of health facilities.

Despite developmental improvements in health indicators, an increase in health financing and PhilHealth coverage, and better treatment-seeking attitudes among households in the past decades, the Philippine healthcare system is deemed retrogressive rather than progressive (Seposo, 2019). The digitalization of systems in the local setting, therefore, proves to be a challenging quest that many Philippine health institutions struggle to take. In the area of administrative management systems, which accounting, financial flows, and logistics all fall under, internal integration is seen as a way by which ICT-based solutions reap the most benefits for healthcare institutions. The interoperable nature of digitalized management systems allows an easier time for top management of different departments and stakeholders alike to evaluate hospital performance. Asset digitalization is one tool used to control the financial situation of hospitals under this ICT-driver innovation, and it is this same tool that is noted to increase the quality of healthcare services offered in hospitals (Gastaldi et al., 2012).

3.7.2 International Digitalized Healthcare Innovations

Accounting technologies have emerged in the international scene in the past years which all serve to be potential models for the local setting. Patient-level Information and Costing Systems (PLICS) is one example, and it is used in the United Kingdom to track the cost of care for each patient. The information generated from this system helps manage the finances of a healthcare facility as it can be used to identify where costs can be reduced not only for the patient but also for the provider. On a larger scale, electronic medical record (EMR) systems have digital accounting integrated within them. Some features include (1) Billing and Revenue Cycle Management, (2) Expense Tracking and Financial Reporting, (3) Integration with External Accounting Systems, and (4) Compliance and Auditing. Billing and Revenue Cycle Management includes automated charge capture, accurate coding, and claim submission, which are contributory factors to a rapid and reliable revenue stream for health facilities.

Digital accounting tools that aid in managing expenses and generating comprehensive financial reports are components of EMR systems as well, and these monitors financial performance and provide insights through customizable reports. This innovation is aligned with accounting objectives, which include compliance to financial regulations and informed decision-making. EMRs are also revolutionary as it champion seamless integration with external accounting systems. These are only a few examples of important features to consider when looking at different EMRs to implement in the country. Interestingly, EMRs are also programmed to be able to synchronize data with popular accounting software in the name of consistency and accuracy of financial records, thereby minimizing the risk of errors, manual data entry, and the overall efficiency of financial reports. Its ability to track financial transactions, ensure data security, and generate audit trails for accountability is also ideal for the Philippine setting given the volatile macro and microeconomic conditions (Kumar et al., 2022).

Artificial intelligence (AI) and machine learning are also some systems that the international medical and accounting world has been benefiting from as these technologies help identify patterns in financial data, identify anomalies, and predict potential risks. AI and machine learning, therefore, enable medical and accounting institutions with proactive financial planning and risk mitigation by empowering healthcare accountants to make data-driven decisions to improve both financial health and public health at large. Healthcare service providers have taken advantage of digitalization for management purposes and to achieve operational efficiency. This was apparent throughout the development of the digital health market which initiated policies related to technological and socio-economic support and advancement.

After the incorporation of the digitalized accounting system, findings of the study demonstrate that clinic operational costs were lower since the generation of reports on outpatient data, clinical receipts, and expenditure reports are now processed by the system and stored using a database. Moreover, making receipt and expenditure reports is now more efficient since the data stored in a database can just be checked and processed into an electronic report. Overall, the findings underscore the significance of digitalization in streamlining processes for better management of financial activities within hospital settings.

Aside from information systems, other modalities have also been explored in the digitalization of hospital accounting systems. The study by Muhammad and Raharja presents an innovative approach to digitalizing hospital accounting systems through the implementation of the *Ramit* tech robot accountant (Muhammad and Raharja, 2021). The research analyzes the improvements brought about by this digital robot in bookkeeping and financial reporting processes in a hospital. By autonomously handling tasks such as journalizing transactions and generating financial statements, the robot minimizes the need for human intervention thereby enhancing operations and reducing the cost of employing human accountants. However, there are limitations such as the robot's inability to process analog data. Nevertheless, the findings of the study highlight the significant role that digital technologies can play in advancing hospital accounting systems.

4. Data Analysis

Results and discussions gathered from 15 respondents are shown in this section. Questions are designed for multiple responses. Hospital Information Management Systems (HIMS) is basically what the hospitals use in their digitalization system.

Table 1: Digitalization status of healthcare facilities surveyed

	Year Digitalized	Perceived Level of Digitalization	Digital Systems Currently in Use
Hospital 1	2014	Fully digitalized (67% of respondents) 51-75% digitalized (33% of respondents)	Electronic Health Records (EHRs), Patient Portals, Mobile Applications, Telemedicine Platforms, Electronic Registries, Analytic Systems, Remote Monitoring, Wearable Devices, Care-seeker and Care Team Communication Support, Geographical and Population Health Displays
Hospital 2	2022	Fully digitalized (40% of respondents) 51-75% digitalized (50% of respondents) 26-50% digitalized (10% of respondents)	Electronic Health Records (EHRs), Patient Portals, Mobile Applications, Telemedicine Platforms, Electronic Registries, Analytic Systems, Remote Monitoring, Wearable Devices, Care-seeker and Care Team Communication Support, Geographical and Population Health Displays
Hospital 3	2016	Fully digitalized (80% of respondents) 51-75% digitalized (20% of respondents)	Electronic Health Records (EHRs), Patient Portals, Mobile Applications, Telemedicine Platforms, Electronic Registries, Analytic Systems, Remote Monitoring, Care-seeker and Care Team Communication Support
Hospital 4	2020	Fully digitalized (50% of respondents) 51-100% digitalized (50% of respondents)	Electronic Health Records (EHRs), Patient Portals, Mobile Applications, Telemedicine Platforms, Registries, Remote Monitoring, Care-seeker and Care Communication Support

All facilities have implemented various forms of digital systems within the past 10 years, at varying levels. The perceived level of digitalization varies among hospitals. Likewise, respondents' perceptions also vary.

Table 2: Summary of challenges across all healthcare facilities, pre-digitalization

Most common Challenges	Number of responses
Slow processes due to • Manual encoding • Slow queues • Time	15 (100%)
Slow Internet connection	7 (46.7%)
Organization of records • Difficulty finding old records, records	5 (33.3%)
Higher risk of error	5 (33.3%)

The summary of challenges across all healthcare facilities before the start of digitalization is shown in Table 2. All respondents believe that hospital work is slow in processing data because encoding is done manually, slow queues, and is time-consuming. Almost half of the respondents observed that their internet connection was slow. One-third of the respondents had difficulty in finding old records and encountered a high risk of errors.

Table 3: Challenges encountered by healthcare facilities during digitalization

Challenges	No. of responses
Proper process and flow	14 (93.3%)
c-Adjustment	10 (66.7%)
Slow filing of patient profiles/slow progress or transition	8 (53.3%)
Slow Internet connection	7 (46.7%
Familiarity with system	7 (46.7%)
HMO accreditation	5 (33.3%)
System outages (due to poor connection)	5 (33.3%)
Doubling of records	5 (33.3%)

One of the glaring problems during the implementation phase of digital systems in hospitals was the slow transition and processes. Old patient profiles, which were created manually, now had to be encoded into the new digital database. This tedious task was considered a challenge for the healthcare staff since using the new unfamiliar technologies would entail experiencing a learning curve that could slow down the processing of data. Like the challenges reported before digitalization, slow Internet connection was still a concern. Five or 33.3% of the respondents specifically mentioned system outages have been experienced relating to poor Internet connection. Likewise, the same % of the respondents faced difficulties with HMO accreditation and double recording.

Table 4: Challenges encountered by healthcare facilities post-digitalization

Multiple entries per ancillary/department	1
Updating records	1
Training needed for old and current employees	2
Slow Internet connection	5
Difficulty in saving files due to the number of buttons to click	1
MD accreditation	1
Down system/servers halt operations	2
Double recording	1

Respondents noted that digitalizing the hospital system made access to patient information easier, and thus improved productivity and efficiency for their establishments. However, the problem of poor internet connection persisted even after the healthcare staff were more familiar with the digital software that was implemented, with five respondents citing this issue. Employees across the four (4) health facilities noted that updating and keeping data consistent was a challenge with the digital systems. There were instances where patients would have duplicate entries per ancillary/department. Other employees found some difficulty saving and updating records. Poor internet connection was given as a reason for the difficulty in the user interface. Some respondents found this tedious since they had to click several buttons before saving patient data.

Internet connectivity was a concern throughout the stages of digitalization examined, and while the issue was more specific to these hospitals, it may

reflect a larger concern with healthcare facilities being reliant on the Internet to make full use of digital resources. The concern regarding duplicate entries may point to the need for healthcare facilities to improve on real-time updates and continuity across all departments. The challenges of digitalization to the accounting system of health facilities are shown in Table 5.

Table 5: Status/ Feedback of the Accounting Department Throughout the Process of Digitalization

Before Digitalization	During Digitalization	After Digitalization
• Slow processing	• Staff is not familiar • Hard time to adjust	• Increased satisfaction • Recordkeeping is efficient • Faster retrieval of results

The status of the accounting department was also asked and categorized based on whether any improvements were evident upon initiating the digitalization process. The results can be seen in Table 5 above. Before digitalization, slow processing was noted. During digitalization, the staff were unfamiliar with the new setup and had a hard time adjusting to it. After digitalization, there was an increase in satisfaction; recordkeeping became more efficient and the process of retrieving results became faster.

Table 6: Advantages of digitalization of accounting systems

Advantages	Number of Responses
Faster processing of transactions	15 (100%)
Improved accuracy of financial records	12 (80%)
Better integration with other hospital departments	12 (80%)
Enhanced security of financial data	12 (80%)
Streamlined billing and invoicing processes	12 (80%)

Accounting departments of the hospitals benefitted from the digitalization of the accounting system. All respondents believe that the processing of transactions is faster than before digitalization, while 80% perceived that there is improvement in the accuracy of financial records, better integration with other hospital departments, enhanced security of financial data, and streamlined billing and invoicing processes. The respondents were asked questions regarding their future expectations about the digitalization of accounting systems in hospitals. They unanimously agreed that digital accounting systems allowed for faster processing of transactions with improved accuracy. They were asked about the readiness of Philippine Healthcare Systems to adapt to digitalized hospital systems. Half of the respondents answered "No", while the remaining half answered ''Yes''. Those who answered ''Yes'' agreed that it is time for hospitals to adopt digital systems because we are currently in the computer era. Those who answered ''No'' stated that there is a lack of data security and a lack of funds in government institutions.

5. Conclusions

The integration of digital technologies into healthcare systems has revolutionized the way hospitals management of patient records, billing processes, and overall operations. Digitalization represents a pivotal advancement in hospital accounting systems, significantly impacting billing processes, financial data management, and claims processing. Through automation and integration of patient information, HIMS minimizes errors, streamlines operations, and facilitates real-time decision-making. By revolutionizing traditional procedures, HIMS enhances overall operational efficiency and improves financial management practices in hospitals. As digital technologies continue to evolve, the adoption of HIMS is poised to further revolutionize healthcare systems, ensuring accuracy, timeliness, and effectiveness in managing patient records and financial transactions.

Recommendations

Considering the findings and discussions above, the following are the recommendations:

- Philippine healthcare institutions should include in their long-term plans the gathering of support and resources for transitioning into the digitalized healthcare system. While this is an inevitable course for most industries of today, a careful transition plan within the next few years must be adopted as the digitalization of hospitals requires an interdepartmental and multi-institutional effort. Specific to the accounting system in hospitals, increasing the level of digitalization can improve recordkeeping and retrieval processes, minimize the risks of human errors, and optimize financial analyses. Doing so can aid in managerial decision-making regarding resource allocation, which has been a longstanding problem in the Philippine setting, as well as in bettering health outcomes for the greater population that healthcare institutions serve.

- Preparations for the skill enhancement of human resources should also be done in anticipation of this transition, and it must start within educational institutions that mold the future workforce. Sponsorship of employee training is recommended to maintain the competitiveness of the current local healthcare system and to prime the future and ideal digitalized ecosystem.

- To facilitate this, a proper cost-benefit analysis is recommended on the level of the individual institutions as well as that of the greater Philippine Health System which operates on the background of the Universal Health Care Law and a devolved system. With government funds earmarked specifically for health, investments for a fully digitalized future should already be accounted for in the books on the local and national scale.

- Workflow integration between the hospital and accounting departments should also be considered in the digitalization of accounting systems.

- Further research should be done to examine the hybridization of accounting expertise in the context of value-based healthcare and digital health investment strategies

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