

Impact of Digital Health Technologies on Healthcare Service Quality and Patient Satisfaction



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Abstract

Digital health technologies are also steadily changing health care management to facilitate the exchange of information, co-ordination of services, organizational efficiency and patient-centredness. The use of digital health technology and its effect on healthcare service quality and patient satisfaction were explored with electronic health record (EHR) interoperability as a proxy for digital-health capability. Secondary hospital-level data was used and a quantitative, cross-sectional design adopted. The analytical data set consisted of 1,000 records from 11 distinct acute-care hospitals, and included metrics for EHR interoperability, healthcare quality indicators, and patient-experience measures, all captured by HCAHPS. Descriptive, comparative and exploratory correlational analyses were used. The results indicated that 90.9% of hospitals had a positive status of EHR interoperability recorded. But 45.5% were below the national average for patient experience, showing that having digital capability does not guarantee better outcomes for patients. Other areas of performance were comparatively favourable, with 63.6% of hospitals above the national average for timeliness of care and 72.7% at the national average for effectiveness of care. Doctor communication had a relatively high mean rating, and care transition had the lowest rating of the HCAHPS dimensions. Initial exploratory correlations indicated that there were positive relationships between patient experience and overall hospital performance, but the results were not statistically significant. The results highlight the need for digital interoperability to be included in the management of service quality, staff competencies, communication, and redesign of processes in the interest of healthcare organizations' sustainable performance and satisfaction.

Keywords: Digital Health Technologies; EHR Interoperability; Healthcare Service Quality; Patient Satisfaction; Healthcare Management

Introduction

Digital transformation is emerging as a significant strategic step in the overall management of healthcare today, positively impacting how hospitals organize information, coordinate services, communicate with patients and track quality of care. Digital health technologies are tools that utilize technology to help facilitate health care delivery, such as electronic health records (EHRs), interoperable health information systems, telemedicine, mobile health applications, digital patient platforms, artificial intelligence and more. They can be adopted to enhance information availability, clinical coordination, and patient-centredness healthcare outcomes and organizational efficiency (Alawiye, 2024). Additionally, virtual and digitally supported care models provide opportunities to improve healthcare outcomes and patient experience while keeping costs of service delivery controlled (Longyear, 2021). Therefore, digital transformation can be viewed as not only a technological advancement, but a healthcare management innovation and can impact organisational processes and service performance

(Marbough et al., 2023).

Healthcare service quality is a major issue for hospital managers, as patients have become more demanding regarding the quality of the services they require – safe, timely, effective, responsive and efficient coordination. The 4.0 technologies in the healthcare sector have opened the door for healthcare organizations to redesign the traditional service processes by connecting, automating, making information available in real time, and making decisions based on data (Al-Assaf et al., 2024). The literature review suggests that the use of digital technologies can impact various aspects of care quality, and that they can offer healthcare organisations a new approach to improve quality of care. Likewise, digital health interventions have the potential to enhance access to healthcare services and improve the quality of the care (Erku et al., 2023). The developments mentioned above increase the relevance of digitalisation in the administration and strategic quality management of hospitals (Sony et al., 2023).

Within the realm of digital innovations, EHRs and interoperable information systems stand out as pivotal technologies, empowering healthcare providers and systems to access, share, and leverage patient data throughout the healthcare journey. PCDHRs have the potential to drive better health care outcomes, improve information availability and patient engagement (Brands et al., 2022). Digital platforms also show how technological innovation can change the provision of health services as well as influence users' perceptions and satisfaction (Kitsios et al., 2023). In terms of management, however, the benefits of Digitalization hinge on the ability of technological capability to lead to improvements in the actual delivery of the services. Digital-era quality management, thus, needs healthcare organizations to go beyond just digitalization as an information-technology initiative, but to adopt the integration of technology with the broader practices of quality in services (Schiaivone et al., 2023). Evaluation frameworks must therefore tie in with measurable aspects of healthcare quality (Silva et al., 2024).

Patient satisfaction and experience are important measures of healthcare organizational performance as they reflect patients' perception of accessibility, communication, responsiveness, coordination and overall service encounters. Studies on EHS show that eHealthcare can have an impact on patients' satisfaction, but this is dependent on the context and execution of the eHealthcare services (Aboumoussa et al., 2025). Digital technologies also enable ways to capture patient experiences and leverage this information to enhance service delivery and care quality (Dodson et al., 2024). Larger-scale, studies of digital-health show that user experience is a key factor in the effectiveness of sustainable, technology-driven health interventions (Aytekin et al., 2025). Thus, systematic assessment of the association between digital health and patient satisfaction is warranted, in addition to traditional assessments of healthcare quality (Xavier et al., 2024). The literature also reveals that digital technologies can have the potential to enhance patient experiences and the quality of care, thereby highlighting their strategic significance for healthcare organizations (Ranatunga & Muthukumarana, 2025).

Nevertheless, these works have been generally reviewed independently, and there is a lack of understanding regarding the relationship between the adoption of digital-health, healthcare service quality and patient satisfaction. This necessitates the need for empirical studies which include these dimensions in a healthcare-management context. In view of this, the current study focuses on a digital health technology called EHR interoperability and assesses the association between the implementation of EHRs and healthcare service-quality measures and patient satisfaction. The study combines both technology adoption and quality/patient-experience outcomes to offer evidence to hospital managers, healthcare administrators, and decision makers for the adoption

of technology for sustainable service improvement.

Research Objectives:

- To examine the impact of digital health technology, represented by EHR interoperability, on healthcare service quality.
- To assess the impact of digital health technology on patient satisfaction and patient experience.
- To evaluate the relationship between healthcare service quality and patient satisfaction within a digitally transforming healthcare environment.

2. Methodology

2.1 Research Design

A quantitative, cross-sectional, and analytical research design was used to analyse the effect of digital health technologies on the quality of healthcare services and satisfaction of patients. The study aimed to assess measurable relationships between the adoption of digital health and hospital service-quality indicators and patient-experience outcomes, which justified the use of a quantitative approach. The investigation was undertaken from a healthcare management perspective, with a focus on the role of interoperability of EHRs (electronic health records) as an organizational digital-health capability. This design facilitated the comparison of healthcare performance and patient-experience indicators by digital-health status of healthcare facilities.

2.2 Data Source and Study Sample

The study relied on secondary data on healthcare facilities, patient experience, hospital characteristics, EHR interoperability, and various dimensions of healthcare service quality. A data set of $n = 1000$ and $p = 43$ variables was employed for the present analysis (Healthcare Patient Satisfaction – Data Collection, 2020). Kaggle. These records contained details on hospital identification and location, type of hospital, ownership, availability of emergency services, patient surveys, HCAHPS measures, digital-health interoperability, overall hospital ratings, and comparisons of major indicators of healthcare quality against national averages. This dataset included data for the year 2020, and the survey window for the underlying patient survey was July 2018–June 2019. The secondary data was suitable due to the availability of consistent performance and patient experience measures of hospital performance and the ability to assess the adoption of digital health in the actual health care service environments. Each record was a HCAHPS measure related to a healthcare facility, not a separate, surveyed patient. Therefore, the unit of observation for the analytical data set was the hospital-measure record; facility identifier was maintained to identify multiple observations from the same healthcare facility.

2.3 Measurement of Digital Health Technology

The main explanatory construct of the study was

digital health technology. It was operationalized as the variable "Meets criteria for promoting interoperability of EHRs." This indicator determines if a health care facility met criteria for promoting interoperability of EHRs. EHR interoperability was viewed as an adequate organizational measure of digital-health adoption, since interoperable EHRs enable exchange of digital information, continuity of information along the health care process, and technology-enabled coordination of health care services. To conduct analyses, EHR interoperability status was coded as a categorical variable and split between health care facilities that met the EHR interoperability criteria and those that did not. This variable was intentionally defined as digital-health capability of the EHR to limit the interpretation to the scope of EHR-related digital-health capability. It did not reflect a complete list of all types of digital health technologies like telemedicine, mobile health apps, artificial intelligence, or remote patient monitoring.

2.4 Measurement of Healthcare Service Quality

To measure the quality of healthcare, several indicators were used instead of a single one out of the data set. These included the hospital overall rating and national comparison measures covering mortality, safety of care, readmission, effectiveness of care, timeliness of care and efficient use of medical imaging. These indicators together reflect significant aspects of healthcare organisational performance and afford a multi-dimensional view of the quality of services hospitals provide. The national comparison variables categorized the hospital performance compared to the national standards. These categorical measures were used to assess the extent to which the facilities' performance was above, at the same level as, or below the national average for the same quality dimension. This enabled service quality to be explored from a healthcare-management perspective covering clinical performance, efficiency, timeliness, safety and use of healthcare resources.

2.5 Measurement of Patient Satisfaction and Experience

Patient satisfaction was measured using Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measures from the data set. Variables available were HCAHPS question, answer description, answer percentage, patient survey star rating, linear mean, number of surveys completed, and survey response rate. Patient-experience national comparison and hospital overall rating were also thought to be pertinent measures of patients' assessments of healthcare services. The HCAHPS measures reflect multiple aspects of the hospital experience, such as communication with nurses and doctors, how healthcare staff responds, communication about care and patients' overall assessment of hospital services. The HCAHPS responses were provided as percentages, which provided quantitative data about patient perceptions, and the national comparison measure helped interpret the performance of a hospital's patient

experience relative to the national comparison. These indicators were thus used to operationally define the patient satisfaction/experience component of the research framework.

2.6 Hospital and Organizational Characteristics

The data also included organizational characteristics that were taken into account in describing the study sample and interpreting the study results. These included hospital type, ownership of the hospital, availability of emergency services, geographical location, state, county and facility identification. From a healthcare management standpoint, this information was pertinent as organizational structure, and service configuration can play a role in differences in technology adoption, service quality, and patient experience. Facility identifiers were also crucial, as more than one HCAHPS observation may have been made in the same hospital.

2.7 Data Preparation and Processing

The data were cleaned for completeness, consistency, duplicated data, missing data, non-applicable answers, and formats of variables before statistical analysis. Administrative variables and footnotes which were not relevant to hypothesis testing were separated from substantive analytical variables. Entries that were coded as "Not Applicable" and other responses that were not numerically scored in the variables that were scored numerically were scored numerically as appropriate. Categorical variables (such as EHR interoperability, national quality comparisons) were coded into analytically meaningful categories. Where applicable, numerical variables, including percentages of HCAHPS answers, hospital ratings, completed surveys, and survey response rates were transformed into appropriate quantitative variables. Repeated measures of HCAHPS data within facilities remained intact and accounted for in the choice and interpretation of statistical procedures. No synthetic observations were produced, and the results were limited to the information contained in the data set used.

2.8 Statistical Analysis

Correlations between the variables of the study. First, to summarize hospital characteristics, EHR interoperability status, healthcare service-quality measures, and patient-experience indicators, descriptive statistics were used. Categorical variables were presented as frequencies and percentages while the numerical variables were presented as means, standard deviations, and other appropriate summary measures. Comparative analysis was performed to determine if there were differences in healthcare service-quality and patient-experience outcomes by EHR-interoperability status. For the parametric procedures, appropriate methods were used, depending on the properties and distribution of the variables measured. Relationships between categorical measures were assessed with appropriate tests of independence and quantitative measures were assessed with correlation analysis when appropriate. Using regression analysis, the

relationship between digital-health adoption and health-care outcomes was estimated with relevant organizational characteristics being considered. Two separate models were developed, one for healthcare service quality and patient satisfaction outcome. The major explanatory variables were the hospital and service characteristics and EHR interoperability. Healthcare service quality and patient satisfaction were also examined to understand if improvement in healthcare organizational service performance was related to patients' satisfaction. A conventional threshold of 0.05 was used for determining statistical significance, and effect estimates and confidence intervals were taken into account when interpreting the statistical significance and practical relevance of the relationships observed.

2.9 Ethical Considerations

This study relied only on secondary healthcare-facility and aggregated patient-experience data and did not interact directly with patients, include experimental interventions or the collection of personally identifiable patient information. The analysis was therefore carried out at the level of the hospital performance and the combined survey measures. Data will be used only for academic research and interpretation of findings will be aimed at organizational healthcare management, digital innovation and service quality / patient experience, not at identifying individual patients.

3. Results

The analysis was done with the 1000 records and 43 variables provided in the dataset. Since there are multiple measure-level records for the same healthcare facility in the HCAHPS data set, characteristics of the hospital were assessed after identifying the unique healthcare facilities. One thousand observations were made in 11 different acute-care hospitals. Patient-experience measures were examined, and hospital-level quality measures were examined in the context of national comparison categories that utilized the available HCAHPS measures.

3.1 Characteristics of the Healthcare Facilities

All 11 healthcare establishments were included as acute-care hospitals and offered emergency services. As for ownership, four hospitals (36.4%) were government hospital district/authority hospitals, four (36.4%) were voluntary non-profit private hospitals, and three (27.3%) were proprietary hospitals. There was considerable variability between facilities, with the number of completed patient surveys ranging from 34 to 2,162, with a mean of 602.64 patient surveys per hospital. The survey response rate averaged 25.09%, with a low of 18% and a high of 34%. The main characteristics of these are summarized in Table 1 and the distribution by hospital ownership is shown in Figure 1.

Table 1. Characteristics of the Healthcare Facilities

Characteristic	Result
Total dataset records	1,000
Unique healthcare facilities	11
Acute-care hospitals	11 (100.0%)
Emergency services available	11 (100.0%)
Government—hospital district/authority	4 (36.4%)
Voluntary non-profit—private	4 (36.4%)
Proprietary	3 (27.3%)
Mean completed patient surveys	602.64
SD of completed surveys	631.15
Range of completed surveys	34–2,162
Mean survey response rate	25.09%
SD of survey response rate	5.49%
Survey response-rate range	18–34%

As shown in Figure 1, government and voluntary non-profit hospitals were equally represented, whereas proprietary facilities accounted for a slightly smaller proportion of the analysed hospitals.

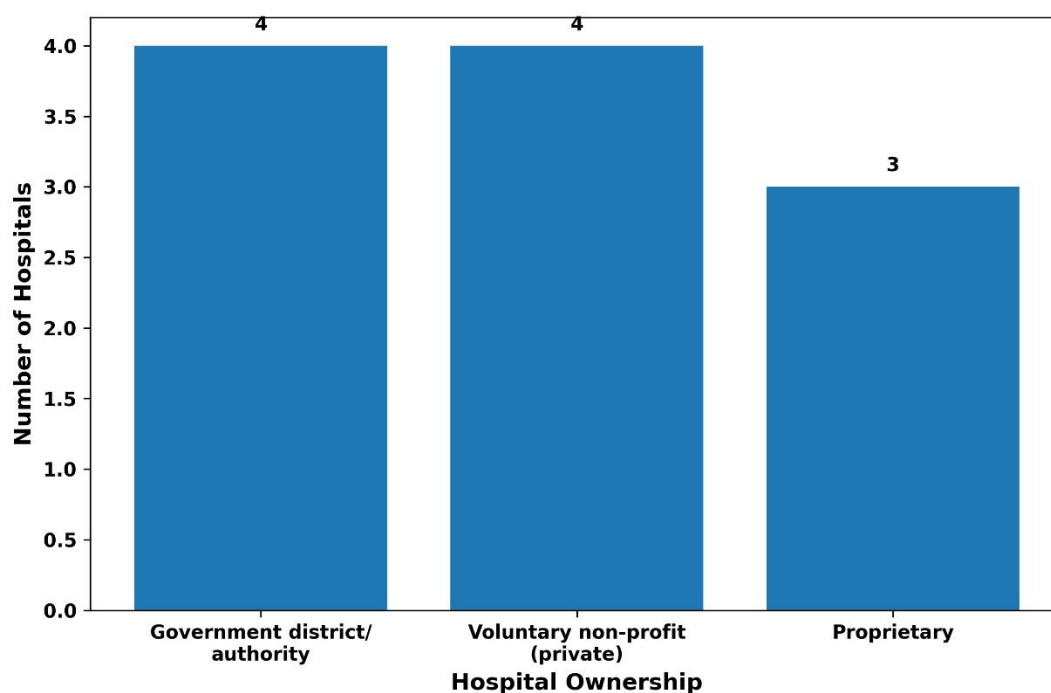


Figure 1. Distribution of Hospitals by Ownership

3.2 Digital Health Technology and EHR Interoperability

Digital-health adoption was measured by the hospital's response to the question regarding its meeting the criteria to encourage EHR interoperability. Of the 11 distinct hospitals, 10 (90.9%) reported a “Yes” value for the “Have you recorded the status of EHR interoperability?” question, while one hospital (9.1%) did not report a value. Not a single hospital in this sample of 1,000 was found to have “No” explicitly recorded as shown in Table 2.

Table 2. EHR Interoperability Status of Healthcare Facilities

EHR interoperability status	n	%
Meets interoperability criteria	10	90.9
Status not reported	1	9.1
Explicitly does not meet criteria	0	0.0
Total	11	100.0

The distribution is visualized in Figure 2. The predominance of hospitals satisfying the interoperability criterion indicates a high level of EHR-related digital-health capability among facilities represented in the sample.

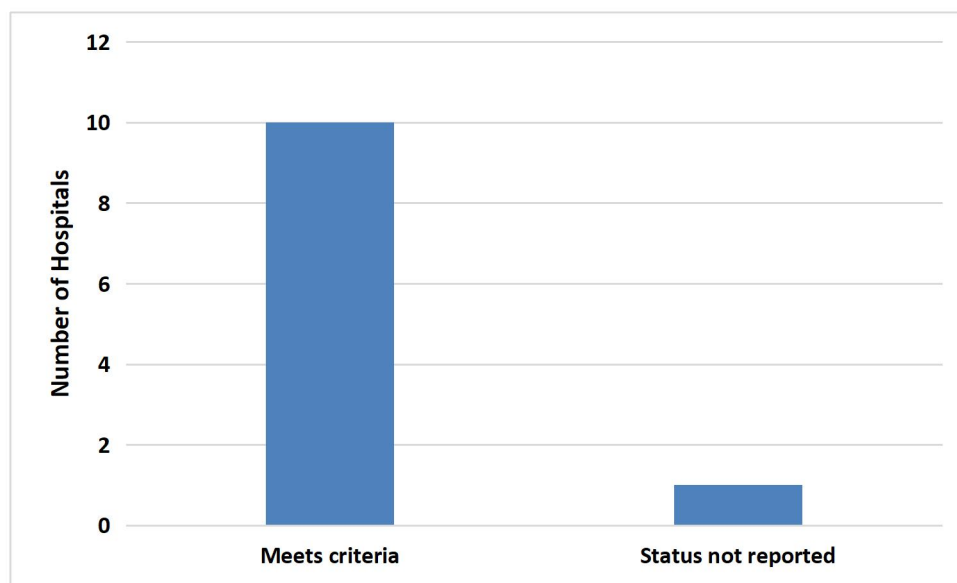


Figure 2. EHR Interoperability Status

3.3 Healthcare Service Quality

Hospital quality performance was evaluated using national comparative measures for mortality, safety of care, readmission, effectiveness of care, timeliness of care, efficient use of medical imaging and patient experience. Results show that there is significant variation between the various dimensions of healthcare service quality (Table 3).

Table 3. Healthcare Service-Quality Performance Relative to National Benchmarks

Quality indicator	Below average n (%)	Same as average n (%)	Above average n (%)	Not available n (%)
Mortality	5 (45.5)	5 (45.5)	0 (0.0)	1 (9.1)
Safety of care	2 (18.2)	4 (36.4)	2 (18.2)	3 (27.3)
Readmission	3 (27.3)	3 (27.3)	4 (36.4)	1 (9.1)
Patient experience	5 (45.5)	3 (27.3)	1 (9.1)	2 (18.2)
Effectiveness of care	2 (18.2)	8 (72.7)	0 (0.0)	1 (9.1)
Timeliness of care	1 (9.1)	3 (27.3)	7 (63.6)	0 (0.0)
Efficient use of medical imaging	4 (36.4)	5 (45.5)	0 (0.0)	2 (18.2)

Timeliness of care was one of the top performing dimensions with seven hospitals (63.6%) above the national average, as shown in Table 3. The effectiveness of care was relatively stable with eight hospitals (72.7%) performing at the national average. There was also a relatively good performance on Readmission, with four hospitals (36.4%) scoring higher than the national average. In contrast, five hospitals (45.5%) were below the national average for mortality and five (45.5%) were below the national average for patient experience.

3.4 Patient Experience and Satisfaction

There was substantial variation between hospitals in the patient-experience national comparison measure. Five (45.5%) of the 11 hospitals were below the national average, three (27.3%) were at the national average and only one (9.1%) was above the national average. Two hospitals (18.2%) did not have patient-experience comparison information, as shown in Table 4.

Table 4. Patient Experience Relative to the National Average

Patient-experience category	n	%
Below the national average	5	45.5

Same as the national average	3	27.3
Above the national average	1	9.1
Not available	2	18.2
Total	11	100.0

The distribution shown in Figure 3 demonstrates that below-average patient experience was the most frequent category in the sample. Thus, although EHR interoperability was widely reported among these hospitals, favourable patient experience was not uniformly observed.

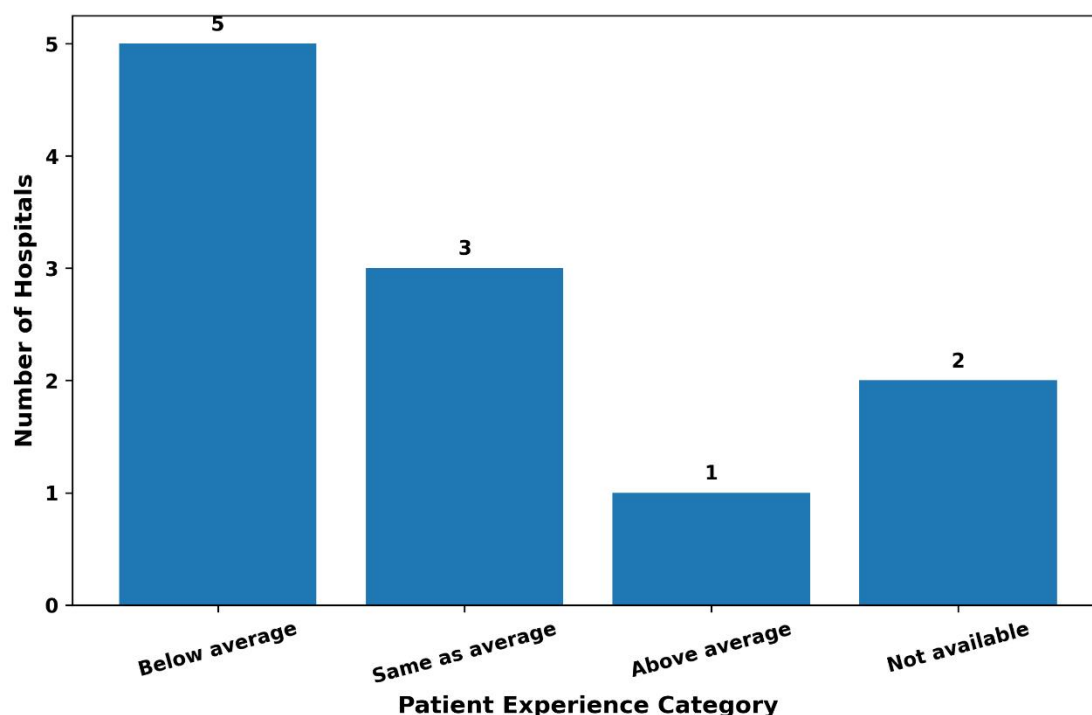


Figure 3. Patient Experience Relative to National Average

3.5 HCAHPS Patient-Experience Star Ratings

An in-depth evaluation was performed using the HCAHPS star rating dimensions available. Means scores differed on various aspects of patients' healthcare experiences, as presented in Table 5.

Table 5. Descriptive Statistics for HCAHPS Patient-Experience Star Ratings

HCAHPS dimension	Valid n	Mean	SD	Min.	Max.
Nurse communication	9	3.11	0.78	2	4
Doctor communication	9	3.44	0.88	2	5
Staff responsiveness	9	3.00	0.87	2	5
Communication about medicines	9	2.89	1.05	1	4
Discharge information	9	3.00	0.71	2	4
Care transition	9	2.44	0.88	1	4
Cleanliness	8	2.75	0.71	2	4
Quietness	8	3.50	0.53	3	4
Overall hospital rating	8	2.88	0.64	2	4

Recommend hospital	8	3.00	0.93	1	4
Summary star rating	8	3.00	0.53	2	4

Of all the dimensions in Table 5, quietness was rated the highest ($M = 3.50$, $SD = 0.53$) followed closely by doctor communication ($M = 3.44$, $SD = 0.88$). The mean score for nurse communication was 3.11. On the other hand, the lowest mean score was for care transition ($M = 2.44$, $SD = 0.88$), followed by cleanliness ($M = 2.75$) and communication about medicines ($M = 2.89$). Overall HCAHPS star ratings averaged 2.88 and the summary patient-experience star ratings averaged 3.00. These differences are demonstrated in Figure 4, where communication was rated as better with physicians than care transition, and communication about medicines.

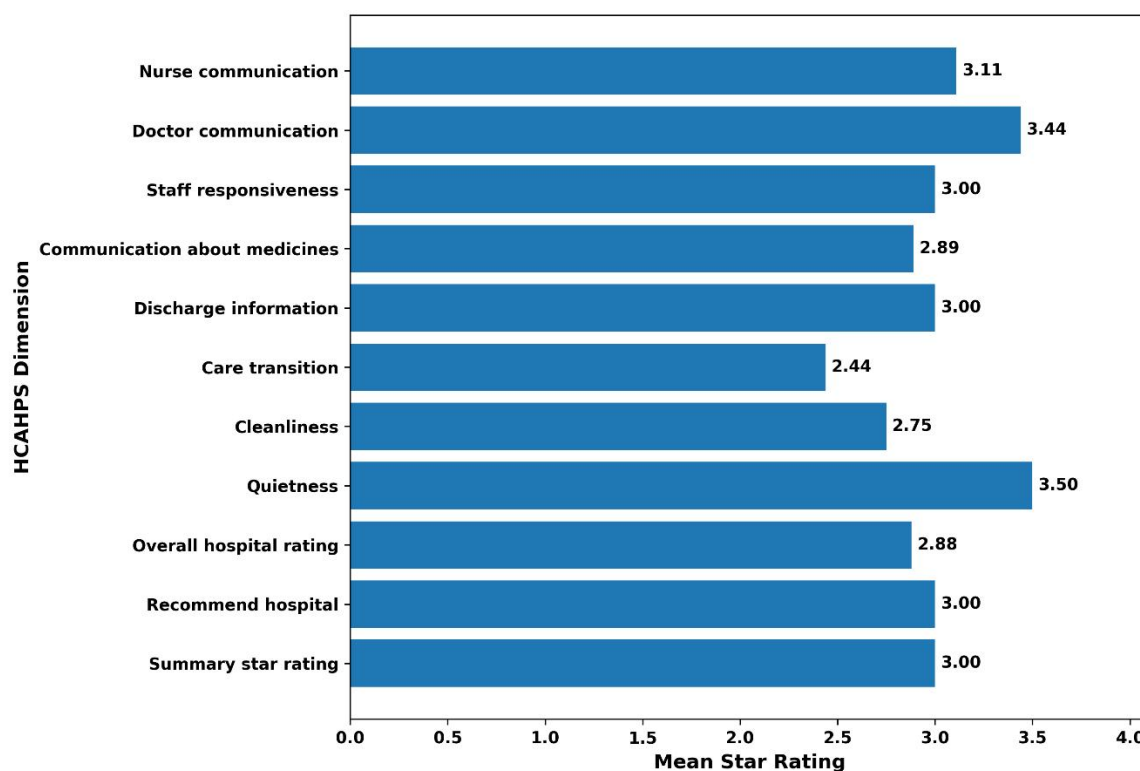


Figure 4. Mean HCAHPS Patient-Experience Star Ratings

The hospital overall rating was available for 10 of the 11 facilities. The mean overall hospital rating was 2.60 ($SD = 0.97$), with ratings ranging from 2 to 4. Six of the 10 hospitals with available ratings had a rating of 2, whereas three hospitals received a rating of 4. One facility did not have an available overall rating. The descriptive results are presented in Table 6.

Table 6. Overall Hospital Rating

Statistic	Value
Hospitals with valid rating	10
Mean	2.60
Standard deviation	0.97
Median	2.00
Minimum	2
Maximum	4
Hospitals rated 2	6 (60.0%)
Hospitals rated 4	3 (30.0%)
Rating unavailable	1 facility

As indicated in Table 6, overall hospital performance was concentrated toward the lower end of the

observed rating range despite widespread EHR interoperability. This pattern is consistent with the patient-experience results, where almost half of the facilities were below the national benchmark.

3.7 Relationship Between Hospital Rating and Patient Experience

A exploratory Spearman correlation was performed on hospitals with matched hospital-level ratings and HCAHPS ratings. There was moderately strong positive correlation between the HCAHPS overall hospital star rating and the hospital overall rating ($\rho = 0.667$, $p = 0.071$, $n = 8$). The association was in the same direction and of the same magnitude, but not statistically significant at the conventional $p < 0.05$ level. Likewise, a positive correlation was found between the HCAHPS overall hospital star rating and the rank national comparison patient-experience measure ($\rho = 0.586$, $p = 0.127$, $n = 8$). Once more, the relationship was not statistically significant and was primarily due to the small number of distinct hospitals available for a facility level analysis.

In summary, the findings do not show a consistent pattern regarding the quality of healthcare and patient experience. 90.9% of the unique hospitals reported on digital-health capability, which includes EHR interoperability, but patient-experience performance was subpar for 45.5% of those facilities. Timeliness of care was an overall fairly robust quality dimension, while patient experience, mortality performance and some care transition dimensions were areas for improvement. HCAHPS also showed that assessments of communication with doctors and quietness were relatively favourable while assessments of care transition and communication about medicines were weaker.

4. Discussion

From the perspective of healthcare management, the present study focused on examining the digital health technology, healthcare service quality and patient satisfaction, with the main indicator of digital-health capability being EHR interoperability. Results showed that 90.9% of the healthcare facilities had recorded positive EHR interoperability status, which shows that there was a significant number of healthcare facilities that had penetrated digitally enabled information management among the healthcare facilities that were studied. This level of interoperability, however, was not always equal to better patient experience as 45.5% of hospitals scored below the national average for patient experience. This discovery suggests that a technological solution alone does not necessarily lead to positive patient experiences and that the impact of digital solutions requires them to be embedded within the process and organization and to be an integral part of how patient care is delivered. Likewise, there's evidence that, when used effectively, e-services in healthcare can have a positive impact on patient satisfaction in the context of providing healthcare services (Asiri et al., 2024). However, users' satisfaction on using digital health is not only

dependent on the availability but also the attributes and perceived value of digital services (Cavacece et al., 2025).

There was significant variation between the service-quality results along the dimensions of service quality. Timeliness of care was a relatively strong area, with 63.6% of hospitals higher than the national average and effectiveness of care was at the national average for 72.7% of hospitals. However, there were fewer positive trends when it came to patient experience and mortality. These differences indicate that digital transformation might have varying relationships with the different healthcare performance dimensions. Past studies have also shown that there is a significant correlation between technology usage, perceived levels of service quality and patient satisfaction within the hospital setting (Emon et al., 2023). Although digital technologies can support information sharing, coordination, accessibility and responsiveness, the extent of the impact on quality is dependent on the effectiveness of the process of translating these capabilities into the routine service processes. There is also evidence from healthcare consumers that the implementation of digital health can affect perceived level of quality of service and experiences (Preko & Budu, 2024). Evaluations of digital-health solutions should therefore include multidimensional service-quality criteria, in addition to the technological performance measures (Rigo et al., 2025).

The HCAHPS results offer more information about the performance of care that is focused on the patient. A relatively favourable mean rating was achieved with doctor communication (3.44), care transition had the lowest mean rating (2.44). Opportunities for development were also identified in communication regarding medicines, and overall hospital ratings. These findings indicate that interpersonal communication, continuity, and responsiveness remain significant even in the ever-changing and more digital healthcare landscape. The adoption of mobile health has been explored in various research, which indicated the interrelatedness of these constructs as technology has the potential to impact patient satisfaction by improving healthcare service quality (Jin et al., 2022). More recently, there have been signs that service quality is a significant link between the adoption of healthcare services and satisfaction (Kanwel et al., 2026). Likewise, service quality can lead to patient satisfaction and patient loyalty to healthcare providers in the long-term (Mayasari & Rachmat, 2025).

The results suggest that efforts to invest in EHR interoperability need to be paired with organizational strategies that enhance communication, care transitions, responsiveness, and other processes that directly impact patients from a healthcare management point of view. Hospital data show that perceptions of the quality of healthcare services via digital channels are significantly influenced by the experience surrounding the use of technology in the delivery of healthcare services (Persis, 2025). While

digital interventions can enhance patient satisfaction, their impact could be different depending on their implementation context and their nature, as a healthcare service (Fennessy et al., 2025). Moreover, the digitally empowered HRM can impact satisfaction by engaging employees and service-quality mechanisms, which highlights the need for a synergy between technological and workforce approaches (Ullah et al., 2026). New health-care services using AI, in turn, show that besides technological sophistication, characteristics such as empathetic interaction should be essential to improve satisfaction (Zaki et al., 2025). Overall, the findings suggest treating digital health as a change in the way the organization or management is conducted, and not as a stand-alone technology investment. The positive associations between HCAHPS hospital ratings and other measures of hospital performance indicate that patient experience and hospital quality may be co-evolving; however, no statistically significant relationships were present in this smaller sample of hospitals. To achieve the best possible results from the healthcare digitalization and its interoperability, the hospital managers should also use service-quality management, workforce development, and redesign the processes of the hospital with patients in mind together with digital interoperability.

5. Conclusion

This study analysed the link between digital-health capability (EHR interoperability) and healthcare service quality and patient satisfaction from a healthcare management perspective. Results showed a high level of interoperability between the EHRs of the Healthcare Facilities, reflecting a high level of adoption of digitally enabled information-management practices. However, high interoperability was not always associated with better patient experience - a large percentage of hospitals did not meet the national standard for the interoperability dimension. This shows that technology alone is not enough to ensure the improvement of patient-centred health care outcomes. The level of performance of healthcare services in the dimensions measured was different. Performance was comparatively good for timeliness and effectiveness of care, but was less good for care transition, communication about medicines, patient experience and mortality performance. Patient assessments also highlighted the need for communication, responsiveness, continuity of care and good service co-ordination. The positive relationships between patient-experience ratings and other hospital measures of performance also indicate that there may be a link between organizational performance and patient experience, albeit that this relationship needs to be confirmed with larger samples. Overall, digital health should be viewed as a service and organizational innovation and not just a technological investment. Hospital executives should combine interoperable digital systems with quality-

management programs, staff training, communication, and redesigning services to meet patient needs. This holistic strategy can boost healthcare provision, improve patient experiences, and facilitate sustainable digital transformation in healthcare organizations.

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