



Factors Influencing National Quality Indicator Reporting Compliance at Independent Medical and Dental Practices

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Abstract

The National Quality Indicators (NQI) are instruments used to measure and evaluate the quality of healthcare services at health facilities, including Independent Medical and Dental Practices (IMDPs). Compliance with NQI reporting is an important component in monitoring and improving healthcare quality; however, its implementation still faces various challenges. This study aims to analyze the factors influencing compliance with National Quality Indicator reporting at Independent Medical and Dental Practices. This study employed a Systematic Literature Review (SLR) method guided by the PRISMA framework. Literature searches were conducted through Google Scholar, PubMed, ScienceDirect, Scopus, and Garuda for articles published between 2021 and 2025. Articles were selected based on predetermined inclusion and exclusion criteria and subsequently analyzed using a narrative synthesis approach. The review findings indicate that NQI reporting compliance is influenced by individual, organizational, and support system factors. Individual factors include the knowledge, understanding of quality indicators, competence, and motivation of healthcare workers. Organizational factors encompass management support, quality culture, supervision, audits, and feedback. Support system factors include workload, resource availability, and the utilization of information technology and health information systems. Knowledge and understanding of quality indicators were identified as the most dominant factors in improving reporting compliance. NQI reporting compliance at Independent Medical and Dental Practices is influenced by various interrelated factors. Improving reporting compliance requires strengthening the competencies of healthcare workers, optimizing health information systems, organizational support, and continuous monitoring and evaluation to support the improvement of healthcare service quality.

Introduction

Healthcare quality is one of the primary indicators in assessing the success of healthcare service delivery (Novitasari et al., 2022). Quality healthcare services are not only oriented toward clinical outcomes but also encompass patient safety, service effectiveness, efficiency, and patient satisfaction (Andriani et al., 2026). In efforts to guarantee and continuously improve healthcare service quality, the Ministry of Health of the Republic of Indonesia has established the National Quality Indicators (NQI) as a standard instrument to measure and evaluate service quality across various healthcare facilities, including Independent Medical and Dental Practices (IMDPs) (Isbandono, 2023). Routine reporting of quality indicators is an essential component of the healthcare quality monitoring and evaluation process, as the data generated

can serve as a basis for decision-making and continuous improvement of healthcare services (Ministry of Health of the Republic of Indonesia, 2024).

The implementation of National Quality Indicator reporting at Independent Medical and Dental Practices represents one form of quality improvement program implementation that is currently being continuously developed within the primary healthcare service system (Darah, 2022). Independent practices play a strategic role as first-level healthcare facilities that serve as the entry point for communities to access healthcare services. Therefore, the quality of services provided needs to be monitored and evaluated through standardized quality indicator measurements (Rusmiati & Nugroho, 2024; Sakaa et al., 2022; Bernardi et al., 2023). Nevertheless, the implementation of quality indicator reporting at independent practices still faces various challenges that have the potential to affect the level of healthcare worker compliance in carrying out reporting activities.

Various studies indicate that the success of quality improvement programs is greatly influenced by the involvement of healthcare workers in the process of measuring and reporting quality indicators. Endalamaw et al. (2023), in a scoping review on primary healthcare quality improvement, explain that human resource competencies, availability of training, organizational support, and monitoring systems are important factors that determine the success of quality improvement programs. That study indicates that limited knowledge and insufficient system support often become barriers to the implementation of quality programs at primary healthcare facilities.

Beyond competency factors, healthcare worker compliance with quality standards is also influenced by the level of understanding of the guidelines and indicators used (Tsandila-Kalakou et al., 2023; Mwaisengela et al., 2025; Hindardjo et al., 2022). Liu et al. (2022) explain that healthcare workers with a good understanding of clinical practice guidelines and quality indicators tend to demonstrate higher levels of compliance in quality improvement program implementation compared to those with limited understanding. These findings indicate that knowledge of quality indicators is one of the important factors that can influence reporting compliance at both independent medical and dental practices.

Workload is also frequently reported as one of the causes of low compliance in healthcare quality reporting. Ahmed et al. (2021) state that high service demands and time constraints are the primary barriers for primary care physicians in carrying out quality improvement activities, including the documentation and reporting of service performance indicators. In independent practices, physicians and dentists are responsible not only for clinical services but also for various administrative tasks, meaning quality reporting is often not a primary priority (Kyriopoulos et al., 2025; Lienhart et al., 2023).

Advances in health information technology offer opportunities to improve compliance with quality indicator reporting. The utilization of health information systems, electronic medical records, and digital reporting platforms can assist healthcare workers in recording and reporting quality data more quickly and accurately (Barbieri et al., 2023; Kumari & Chander, 2024). Greenhalgh et al. (2022) explain that the digitalization of healthcare services can improve documentation efficiency, enhance data quality, and support evidence-based decision-making. This suggests that the availability of information technology can serve as a supporting factor in improving quality indicator reporting compliance at primary healthcare facilities.

In addition to individual and technological factors, organizational support also plays an important role in the implementation of quality programs. Shimpi et al. (2021) explain that a strong quality culture, leadership commitment, continuous supervision, and the regular conduct of audits and feedback can increase healthcare worker engagement in quality improvement activities. A supportive work environment will encourage healthcare workers to be more

compliant in carrying out quality indicator measurement and reporting in accordance with established standards (Hoxha et al., 2024; Ystaas et al., 2023; Moldovan et al., 2023).

Although National Quality Indicator reporting has become mandatory for healthcare facilities, various studies indicate that reporting compliance levels remain variable and are influenced by many factors (Nuritasari et al., 2025). At Independent Medical and Dental Practices, limited resources, insufficient training, high workloads, and suboptimal utilization of information technology are suspected to be factors affecting quality indicator reporting compliance. However, to date, studies specifically examining the factors influencing NQI reporting compliance at Independent Medical and Dental Practices remain relatively limited.

Given these conditions, a comprehensive study is needed to identify the various factors influencing NQI reporting compliance at Independent Medical and Dental Practices. Through a Systematic Literature Review (SLR) approach, this study aims to analyze and synthesize various research findings related to factors associated with quality indicator reporting compliance. The findings of this study are expected to serve as a basis for developing strategies to improve quality reporting compliance and to support efforts to enhance healthcare service quality at Independent Medical and Dental Practices.

Methods

Research Design

This study employed a Systematic Literature Review (SLR) method. The SLR method is a systematic, structured, and comprehensive research approach used to identify, evaluate, and synthesize the findings of prior relevant research, thereby producing strong and accountable scientific evidence (Page et al., 2021). This approach was used to obtain a scientific overview of the factors influencing quality indicator reporting compliance at healthcare facilities, particularly those related to Independent Medical and Dental Practices (IMDPs).

The SLR method was chosen because it is capable of providing more objective scientific evidence based on the synthesis of various published national and international studies. Additionally, this approach was used to identify research gaps concerning quality indicator reporting compliance at Independent Medical and Dental Practices, which to date remains relatively limited compared to research conducted at hospitals and other primary healthcare facilities.

Literature Search Strategy

The article search process was conducted electronically through several scientific databases, namely Google Scholar, PubMed, ScienceDirect, Scopus, and Garuda. The literature search was conducted from January to March 2026 using combinations of keywords tailored to the research focus, such as "quality indicator reporting," "quality indicators," "quality improvement," "quality measurement," "compliance," "adherence," "health information system," "primary care," "physician practice," "dental practice," "mutu pelayanan kesehatan," "indikator mutu," "pelaporan mutu," "kepatuhan pelaporan," "praktik mandiri dokter," and "praktik mandiri dokter gigi."

The literature search was conducted using Boolean operators (AND and OR) to obtain articles relevant to the research objectives. The articles sought were national and international publications from 2021 to 2025, ensuring that the information obtained reflects the most current and relevant developments in healthcare quality system implementation.

Inclusion and Exclusion Criteria

The inclusion criteria for this study comprised national and international scientific articles published between 2021 and 2025, available in full text, discussing factors influencing quality indicator reporting compliance, quality improvement program implementation, quality

improvement, health information systems, or health data reporting at healthcare facilities. Articles could be quantitative, qualitative, mixed methods, systematic reviews, or scoping reviews published in Indonesian or English.

The exclusion criteria included articles not relevant to the research focus, duplicate articles, articles not available in full text, articles in the form of editorials, commentaries, conference proceedings, letters to the editor, and articles that did not clearly describe research methods and findings.

Article Selection

The article selection process was carried out using the stages outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2021). In the initial stage, articles were identified from all databases used. Articles were then screened based on their titles and abstracts in accordance with the research focus on factors influencing quality indicator reporting compliance.

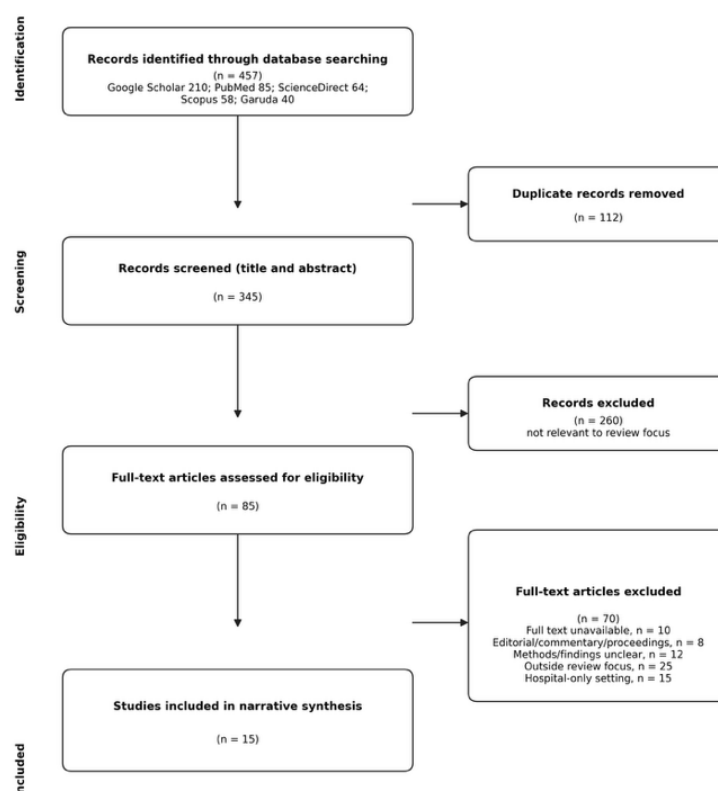


Figure 1. Prisma Diagram

The electronic search across five databases yielded 457 records (Google Scholar n = 210; PubMed n = 85; ScienceDirect n = 64; Scopus n = 58; Garuda n = 40). After 112 duplicate records were removed, 345 unique records underwent title and abstract screening, of which 260 were excluded for falling outside the scope of quality indicator reporting compliance in primary care or independent practice settings. The remaining 85 articles were retrieved and assessed in full text against the eligibility criteria; 70 were excluded (10 for inaccessible full text, 8 for being editorials, commentaries, or conference proceedings, 12 for insufficiently reported methods or findings, 25 for being outside the focus of quality-indicator reporting compliance, and 15 for being conducted exclusively in hospital settings with no relevance to independent or primary-care practice). Fifteen (15) articles satisfied all inclusion criteria and were retained for narrative synthesis.

Data Extraction

Data from articles meeting the inclusion criteria were extracted using a literature synthesis table. The information extracted included the researcher's name, year of publication, country of study, research title, research objectives, research design, sample size, research variables, research findings, and factors influencing quality indicator reporting compliance. The data extraction process was carried out systematically to facilitate the identification of similarities and differences in findings across the various articles analyzed.

Data Analysis

Data analysis was conducted using a descriptive narrative synthesis method. Data obtained from various articles were compared, grouped, and synthesized based on thematic similarities. The analysis was conducted to identify factors influencing quality indicator reporting compliance at healthcare facilities.

These factors were then grouped into several main categories: individual factors (knowledge, competence, motivation, and attitudes of healthcare workers), organizational factors (leadership, quality culture, management support, and supervision), resource factors (workforce size, workload, and availability of facilities and infrastructure), technology and information system factors, as well as regulatory and policy factors.

The results of the literature synthesis were then presented in the form of a scientific narrative and a table of prior studies to facilitate the interpretation of research findings and to support a comprehensive research discussion. Through this synthesis process, it is hoped that a clear picture can be obtained of the dominant factors influencing NQI reporting compliance at Independent Medical and Dental Practices, which can serve as a basis for developing primary healthcare quality improvement strategies.

Result and Discussion

The findings of the literature review indicate that compliance with National Quality Indicator (NQI) reporting is one of the important components in efforts to improve healthcare service quality at primary healthcare facilities, including Independent Medical and Dental Practices (IMDPs) (Saputra, 2025). Quality indicator reporting functions as a service performance evaluation tool that enables healthcare facilities to conduct continuous monitoring, control, and quality improvement. Based on the synthesis of various studies conducted over the past five years, quality reporting compliance is influenced by individual factors, organizational factors, and supporting system factors available at healthcare facilities.

The literature review indicates that knowledge is one of the primary determinants of quality indicator reporting compliance. Healthcare workers with a good understanding of the objectives, benefits, and mechanisms of quality reporting tend to demonstrate higher levels of compliance in carrying out reporting activities compared to those with limited knowledge. Liu et al. (2022) explain that understanding of quality standards and evidence-based practice guidelines contributes to the successful implementation of quality improvement programs in primary healthcare. This suggests that comprehension of the National Quality Indicators is an important factor influencing the compliance of physicians and dentists in conducting the required reporting.

In addition to knowledge, training and socialization were also identified as factors influencing quality reporting compliance. Various studies indicate that healthcare workers who have received training in quality management, quality auditing, and indicator reporting demonstrate higher compliance levels compared to those who have not participated in any training. Endalamaw et al. (2023) state that human resource capacity development through continuous training is one of the primary strategies for improving the implementation of quality improvement programs in primary healthcare services.

Another factor frequently identified in the literature is the workload of healthcare workers. Physicians and dentists operating independent practices are often required to simultaneously carry out clinical services and administrative tasks. High service demands can result in insufficient time to conduct routine quality indicator recording and reporting. Ahmed et al. (2021) explain that high workload is one of the primary barriers to the implementation of quality improvement programs in primary care physician practices. The higher the number of patients served, the greater the likelihood of delays or non-compliance in quality indicator reporting.

The literature review also indicates that the availability of health information systems plays an important role in supporting quality reporting compliance. The utilization of information technology can facilitate the processes of documentation, data processing, and the submission of quality reports more quickly and accurately. Meier et al. (2025) explain that the use of digital dashboards, electronic audit systems, and health information technology can improve the quality of reporting and facilitate the monitoring process of quality indicators. This suggests that independent practices with adequate information system support tend to demonstrate higher levels of reporting compliance.

Beyond technological factors, organizational support is also an important factor influencing quality indicator reporting compliance. Organizational support may take the form of internal policies, supervision, monitoring, mentoring, and leadership commitment to the implementation of quality programs (Ahli et al., 2024; Ominyi & Alibi, 2026; Alsadaan & Ramadan, 2025). Shimpi et al. (2021) explain that a strong quality culture and good organizational support can increase healthcare worker engagement in various quality improvement programs, including quality indicator reporting. In the context of independent medical and dental practices, support from professional organizations and local health authorities plays an important role in promoting reporting compliance.

Audit and feedback were also frequently identified across various studies as factors associated with quality reporting compliance. The conduct of periodic audits enables healthcare workers to receive evaluations of their reporting performance. The feedback provided can serve as a basis for improving reporting quality in subsequent periods. Various studies indicate that audit and feedback mechanisms can improve the quality of documentation and compliance with healthcare quality standards (Ivers et al., 2025; Habib et al., 2022; Sharkiya, 2023).

Overall, the review findings indicate that NQI reporting compliance at Independent Medical and Dental Practices is influenced by a combination of individual, organizational, and supporting system factors. These factors interact with one another in determining the success of quality reporting implementation as part of efforts to improve primary healthcare service quality.

Table 1. Literature Review Findings on Factors Influencing National Quality Indicator Reporting Compliance at Independent Medical and Dental Practices

No.	Author and Year	Research Title	Relevance to the Study
1	Darah, D. U. T. (2022)	Regulation of the Minister of Health of the Republic of Indonesia Number 30 of 2022 Concerning National Quality Indicators for Healthcare Services at Independent Medical and Dental Practices, Clinics, and Health Centers	This regulation establishes the National Quality Indicator (NQI) standards as a reference for measuring, monitoring, and evaluating healthcare service quality at health facilities, including Independent Medical and Dental Practices. Its relevance to this study lies in

			the fact that NQI reporting is an official obligation that serves as the basis for assessing healthcare worker compliance with service quality standards. In the context of this study, this Ministerial Regulation constitutes the primary foundation explaining the types of indicators that must be reported, the reporting mechanisms, and the objectives of primary healthcare quality improvement, making it highly relevant to the analysis of factors influencing NQI reporting compliance at independent practices.
2	Aynalem Endalamaw, Rajendra Bahadur Khatri, Dawit Erku, et al. (2023)	Successes and Challenges Towards Improving Quality of Primary Health Care Services: A Scoping Review	This study has a strong relevance to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as it demonstrates that the successful implementation of quality programs, including quality indicator reporting, is greatly influenced by individual, organizational, and supporting system factors. These findings reinforce that improving NQI reporting compliance requires the strengthening of healthcare worker competencies, continuous training, management support, and effective monitoring and evaluation mechanisms.
3	Xiao-Li Liu, Ting Wang, Jia Ying Tan, Simon Stewart, Rachel J. Chan, et al. (2022)	Sustainability of Healthcare Professionals' Adherence to Clinical Practice Guidelines in Primary Care	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as both studies highlight the factors affecting healthcare worker compliance with established standards. The findings reinforce that a good understanding of the National Quality Indicators, adequate training, and organizational

			support are important factors that can improve the consistency and sustainability of NQI reporting compliance among physicians and dentists.
4	Khalid Ahmed, S. Hashim, M. Khankhara, et al. (2021)	What Drives General Practitioners in the UK to Improve the Quality of Care? A Systematic Literature Review	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as quality indicator reporting compliance represents one form of healthcare worker engagement in service quality improvement programs. The findings reinforce that individual and organizational factor such as motivation, workload, management support, and resource availability can influence the compliance of physicians and dentists in carrying out routine and sustained National Quality Indicator reporting.
5	Nidhi Shimpi, Harsha Hegde, Ivan Glurich, Michael Ryan, et al. (2021)	Establishing a Quality Improvement Culture Within a Large Integrated Medical-Dental Health System with a Population-Based Focus	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as it demonstrates that compliance with quality indicator reporting is influenced not only by individual factors but also by an organizational culture that supports quality improvement. These findings reinforce that commitment to quality, organizational support, and the engagement of physicians and dentists in quality evaluation activities can sustainably improve NQI reporting compliance.
6	Florian L. Meier, Lea Jäger, Oliver Senn, Stefan Markun, Johannes M. Burgstaller (2025)	Effectiveness of Interactive Dashboards as Audit and Feedback Tools in Primary Care: A Systematic Review	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as it affirms that technology-based monitoring systems and

			structured feedback mechanisms are important factors in improving quality reporting compliance. These findings reinforce that the implementation of effective health information systems and audit mechanisms can assist physicians and dentists in conducting NQI reporting more consistently, accurately, and sustainably.
7	Andreas Braun, Daniel A. Behrens, Eva Krczal, et al. (2025)	How Austrian Primary Care Physicians Evaluated Their Available Resources and Quality of Care During the First Year of COVID-19	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as it affirms that workload and resource availability are important determinants in the conduct of quality activities, including indicator reporting. These findings reinforce that NQI reporting compliance at independent practices is greatly influenced by operational conditions such as patient volume, service hours, and the availability of supporting facilities and resources.
8	Laila Baynouna Al Ketbi, Nico Nagelkerke, et al. (2025)	Sustainability of Evidence-Based Primary Care Programs in Abu Dhabi	This study explains that the sustainability of evidence-based primary healthcare programs is largely determined by performance indicator monitoring systems and the consistency of routine quality reporting. Its relevance to this study lies in the fact that NQI reporting compliance at Independent Medical and Dental Practices is an important component of the quality monitoring system that ensures services continue to meet established standards, while also supporting the sustained improvement of primary healthcare service quality.
9	A. Quiambao, M.R. Malekpour,	WHO Guidance for Tracking Non-Communicable	This study discusses WHO guidelines for monitoring non-

	A. Golestani, et al. (2025)	Diseases Towards Sustainable Development Goals	communicable diseases through the use of standardized performance indicators and healthcare service monitoring systems to support the achievement of the Sustainable Development Goals (SDGs). Its relevance to this study lies in the fact that the National Quality Indicators (NQI) represent an implementation of healthcare service performance indicators used to monitor and evaluate service quality at health facilities. In the context of Independent Medical and Dental Practices, NQI reporting compliance constitutes an important component of the quality monitoring system that is consistent with the principles of global health indicator measurement emphasized by the WHO.
10	Anni Vuohijoki, Laura Ristolainen, Jussi Leppilähti, et al. (2025)	Impact of Joint Commission International Accreditation on Occupational Health and Patient Safety: A Systematic Review	This study explains that healthcare accreditation is closely associated with the application of quality indicators and improved compliance with healthcare service documentation, including aspects of patient safety and service quality. Its relevance to this study lies in the fact that NQI reporting compliance at Independent Medical and Dental Practices is part of the effort to standardize service quality, which is also an important component of the accreditation process and healthcare quality assurance. Consequently, the consistent application of quality indicators at independent practices supports the improvement of service quality while simultaneously strengthening standards-compliant documentation systems.

11	Fauzan Adnan, Yuniar Lestari, R. Rasyid (2025)	Analysis of the Adherence to the Time of Doctor Visits in the Inpatient Installation	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as both examine aspects of healthcare worker compliance with the implementation of service quality standards. The findings indicate that the factors influencing compliance in implementing quality indicators also have the potential to influence compliance in NQI reporting. This study therefore supports the view that improving quality reporting compliance requires organizational support, effective supervision, and healthcare worker commitment to a quality-oriented service culture.
12	Eva, A. L. (2025)	The Effect of Dental and Oral Patient Experience on Patient Satisfaction at the Dental Polyclinic of Puskesmas Mangasa Makassar (Doctoral Dissertation, Universitas Hasanuddin Makassar)	This study examines the relationship between patient experience and the level of dental healthcare service satisfaction. Although it does not directly investigate NQI reporting compliance, it is relevant because patient satisfaction is one of the healthcare quality indicators that needs to be measured and reported within the facility's quality management system. The findings indicate that good service quality leads to improved patient satisfaction, thereby making consistent quality indicator reporting by physicians and dentists important as a basis for evaluating and improving service quality at Independent Medical and Dental Practices.
13	M. Sujan, H. Huang, Jeffrey Braithwaite (2023)	National Quality Indicators for Healthcare Services at Independent Medical and Dental Practices, Clinics, and Health Centers	This source addresses quality indicators, data collection mechanisms, reporting, monitoring, and evaluation of healthcare service quality. Its

			relevance to this study is substantial, as it serves as the foundation for analyzing the factors influencing physician and dentist compliance in conducting NQI reporting. This regulation also affirms that quality indicator reporting is a mandatory obligation for healthcare facilities as part of ongoing quality improvement efforts.
14	Saputra, F. (2025)	The Influence of Internal Management Factors on the Achievement of Healthcare Quality Indicators at Primary Healthcare Facilities (Clinic X). <i>Jurnal Ilmu Kesehatan Masyarakat</i> , 14(01), 1–8	This study is relevant to research on factors influencing NQI reporting compliance at Independent Medical and Dental Practices, as it demonstrates that the successful achievement and reporting of quality indicators are influenced not only by individual healthcare worker factors but also by management support and organizational governance. The findings reinforce that organizational factors such as supervision, monitoring, and commitment to quality play an important role in sustainably improving quality indicator reporting compliance.
15	Mustikawati, E. I. (2024)	Internship Report at the Pasuruan City Health Office: An Overview of Resource Adequacy and Dental and Oral Healthcare Services at Primary Healthcare Facilities Collaborating with JKN in Pasuruan City	This report examines the adequacy of resources and the implementation of dental and oral healthcare services at primary healthcare facilities operating in collaboration with the National Health Insurance (JKN) program, encompassing aspects of healthcare personnel, facilities and infrastructure, and service demand. Its relevance to this study lies in the fact that resource availability including human resources, supporting facilities, and service systems — influences the capacity of physicians and dentists to carry out NQI reporting. Resource limitations identified at the primary care level may serve as

			barriers to reporting compliance, particularly at Independent Medical and Dental Practices, which have comparatively limited support systems relative to larger healthcare facilities.
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The findings of this systematic literature review indicate that compliance with National Quality Indicator (NQI) reporting in Independent Medical and Dental Practices is influenced by multiple interconnected factors encompassing individual competence, organizational commitment, and health system support. Rather than functioning independently, these factors interact to determine the effectiveness of quality reporting implementation. This finding is consistent with previous evidence showing that quality improvement programs require simultaneous support from healthcare workers, management, and organizational systems (Endalamaw et al., 2023; Shimpi et al., 2021; Saputra, 2025).

Knowledge and understanding of quality indicators emerged as the most consistently reported determinants of reporting compliance. Healthcare professionals who understand indicator definitions, reporting procedures, and the objectives of quality measurement are more likely to complete reporting accurately and consistently. Endalamaw et al. (2023) emphasized that strengthening healthcare worker competencies is fundamental for successful quality improvement implementation, while Liu et al. (2022) demonstrated that adherence to quality standards is strongly associated with professionals' understanding of clinical guidelines and evidence based practice. Similar findings were also reported by Saputra (2025), who found that internal management and staff competency contribute significantly to the achievement of healthcare quality indicators. These findings suggest that improving knowledge should become the primary strategy for strengthening NQI reporting compliance.

Continuous education and professional training also constitute important interventions for improving reporting compliance. Studies included in this review consistently reported that healthcare workers receiving structured quality improvement training demonstrate better capability in documenting and reporting quality indicators than those without adequate training. Continuous education enables healthcare workers to maintain competency while adapting to evolving quality standards and reporting requirements (Endalamaw et al., 2023; Liu et al., 2022). Therefore, periodic training programs should become an integral component of quality management within Independent Medical and Dental Practices.

Another important factor identified in this review is workload and resource availability. Independent practitioners commonly perform multiple responsibilities simultaneously, including clinical care, administration, and quality reporting. Ahmed et al. (2021) identified workload as one of the principal barriers to healthcare quality improvement activities. Likewise, Braun et al. (2025) demonstrated that patient volume, consultation hours, and operational resources substantially affect the implementation of quality related activities in primary healthcare settings. Similar concerns were also highlighted by Mustikawati (2024), who reported that limitations in human resources and supporting facilities reduce the capacity of healthcare providers to conduct routine quality reporting. These findings indicate that reporting compliance depends not only on healthcare worker motivation but also on organizational resource adequacy.

The implementation of health information systems and digital technologies also plays a strategic role in supporting NQI reporting compliance. Meier et al. (2025) demonstrated that interactive dashboards and electronic audit systems improve reporting accuracy while reducing administrative burden. Similarly, WHO guidance summarized by Quiambao et al. (2025)

emphasizes standardized performance monitoring systems as fundamental components of sustainable healthcare quality improvement. These findings indicate that digitalization facilitates more efficient documentation, faster reporting, and more reliable monitoring of healthcare quality indicators.

Organizational commitment represents another essential determinant identified across the reviewed literature. Shimpi et al. (2021) reported that leadership commitment, organizational culture, supervision, and continuous engagement significantly improve healthcare workers' participation in quality improvement programs. Likewise, Saputra (2025) emphasized that management support, supervision, and organizational governance contribute substantially to successful implementation of healthcare quality indicators. Furthermore, Meier et al. (2025) demonstrated that regular audit and feedback mechanisms enhance organizational learning by encouraging continuous improvement of reporting practices. These findings collectively indicate that NQI reporting compliance should be viewed as an organizational responsibility supported by leadership commitment rather than solely as an individual obligation.

Finally, the reviewed studies consistently demonstrate that compliance with NQI reporting contributes to broader healthcare quality improvement initiatives. Baynouna Al Ketbi et al. (2025) emphasized that routine performance monitoring supports the sustainability of evidence based primary healthcare programs. Vuohijoki et al. (2025) further reported that quality indicators are closely associated with accreditation and patient safety improvement, while Eva (2025) highlighted patient satisfaction as an important quality indicator requiring systematic measurement and reporting. Collectively, these findings demonstrate that NQI reporting extends beyond administrative obligations by strengthening accountability, supporting accreditation, and promoting continuous improvement of healthcare services in Independent Medical and Dental Practices.

Conclusion

Based on the findings of a Systematic Literature Review (SLR) examining various studies on primary healthcare service quality, quality indicator measurement, and healthcare worker compliance with quality reporting, it can be concluded that National Quality Indicator (NQI) reporting compliance at Independent Medical and Dental Practices is influenced by a range of interrelated factors, encompassing individual factors, organizational factors, and healthcare service support system factors.

The review findings indicate that the knowledge and understanding of physicians and dentists regarding the National Quality Indicators constitute the most dominant factor in determining reporting compliance. Physicians and dentists who understand the objectives, benefits, and procedures of quality indicator reporting tend to demonstrate higher levels of compliance compared to healthcare workers with limited understanding. Furthermore, continuous training and socialization play an important role in enhancing healthcare workers' capacity to conduct quality indicator recording, measurement, and reporting in accordance with established standards.

Other factors influencing reporting compliance include workload, time availability, and patient volume. The high service demands in independent practices frequently result in administrative and quality reporting activities being carried out suboptimally. In addition, the availability of health information systems and supporting technology also contributes to improved reporting compliance, as these tools can facilitate documentation processes, data processing, and the more rapid and accurate submission of reports.

The literature review further indicates that organizational support, supervision, monitoring, auditing, and the provision of feedback exert a significant influence on the successful implementation of quality indicator reporting. A work environment that fosters a quality culture, along with guidance from local health authorities and professional organizations, can

enhance the motivation and commitment of physicians and dentists to carry out reporting on a routine and sustained basis.

NQI reporting compliance at Independent Medical and Dental Practices is influenced not only by the individual capabilities of healthcare workers, but also by the support of the systems and organizations within which they operate. Efforts to improve reporting compliance must therefore be pursued through the enhancement of healthcare worker competencies, the optimization of health information systems, the strengthening of monitoring and evaluation mechanisms, and the provision of sustained policy support. As NQI reporting compliance improves, the quality of healthcare services at Independent Medical and Dental Practices is expected to be continuously enhanced, thereby contributing to the delivery of safe, effective, and high-quality healthcare services for the community.

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