

The Power of Teamwork: A Systematic Review of Multidisciplinary Team Management in Saudi Healthcare

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Abstract

Background: Multidisciplinary team (MDT) management has become one of the pillars of improving the delivery of healthcare, especially in severe patient care environments. The assimilation of MDT approaches has also been gradually appreciated in Saudi Arabia in terms of its capacity to increase clinical outcomes and patient satisfaction as well as support professional co-operation. Nonetheless, a methodical synthesis of the evidence, that is unique to Saudi healthcare settings is scanty. Purpose: The purpose of this study was to conduct a systematic review of the available literature on MDT management in Saudi healthcare to clarify some prevalent trends, topics, and issues and get insights to improve policy and practice in this regard. Method: A structured search of five big databases including PubMed, Scopus, Web of Science, CINAHL, and ScienceDirect within the last 5 years (2020-2024) was carried out. The PRISMA criteria were used to screen the studies, and quality assessment is realized using a standard, appraisal matrix. Thematic analysis was done on data synthesis to identify the core themes and sub-themes. Results: Study identified three significant themes: Communication efficiency, interprofessional cooperation, and patient-centered care, with ten studies found to conform to the inclusion criteria. Trends signaled the increasing integration of MDT approaches at the tertiary care and specialty units, with positive effects on the patient safety, the organization of treatment, and the satisfaction of the specialists and healthcare staff. Nonetheless, impediments, in the form of role ambiguity, resources limits and communication gaps, still remained. Conclusion: MDT management in Saudi healthcare proves to be very promising to enhance quality services and patient outcomes. Structural and communication barriers are necessary to address in order to maximize its benefits. Healthcare leaders and policymakers ought to focus on training, resources as well as standardized MDT protocols.

Keywords: *Multidisciplinary Teams, Saudi Healthcare, Interprofessional Collaboration, Patient-Centered Care, Teamwork, Healthcare Management.*

Introduction

Over the past few years, multidisciplinary teams (MDTs) can be considered a hallmark feature of a contemporary healthcare system not only in the international context but also in the scenario of Saudi Arabia (Aljarameez et al., 2023). The integration of various healthcare professionals under collaborative care models that involves physicians, nurses, pharmacists, physiotherapists, and social workers with different healthcare expertise have demonstrated positive patient outcomes, optimization of resource

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utilization, and overall improvement in healthcare quality (Audan & Bandiola, 2024). The push towards the implementation of the team-based care in Saudi Arabia has been complemented by the Kingdom vision 2030 reform agenda in the area of healthcare, which focuses on transforming tradition and the provision of integrated care to cater to the increasing demands of the complex patients. It is especially critical in working towards continuity of care among the various levels of healthcare service, such as the tertiary care, secondary care, and primary care (Alghaylani et al., 2023).

Latest Saudi research has made convincing arguments about the quantifiable benefits of multidisciplinary teams MDT adoption in different clinical settings (Alghaylani et al., 2023). The coordinated MDT interventions were reported to reduce the mortality of patients and adherence to evidence-based practice guidelines, especially in an intensive care setting (Al-Taweel, 2021). Likewise, MDT models led by case managers to the treatment of chronic diseases like type 2 diabetes mellitus in the primary care setting have shown substantial results in glycemic control and cardiovascular risk factors, as has been exemplified in the relevance of systematic team-based care in mitigating the burden of noncommunicable diseases (Alenazi et al., 2024). These results confirm the two-fold usefulness of MDTs both in acute care and long-term care contexts in the Kingdom.

Multidisciplinary teams MDTs do not only improve their clinical performance, but the positive effects also relate to patient safety and organizational performance. Information confirming the postulates of Vision 2030 confirms that multidisciplinary teams MDTs, properly organized, allow reducing the risk of adverse events, eliminating gaps in care delivery, and enhancing interprofessional communication (Al-Shomrani et al., 2024). Moreover, research on the phenomenon of nursing team synergy reported that in case of a good leadership system, division of roles, and shared vision within multidisciplinary teams MDTs, the safety culture in patients is enhanced and staff satisfaction is improved. Nevertheless, variation in realized benefits appears to be evident based on the variation seen in the implementation of these practices in differing healthcare settings (Al Mutair et al., 2023).

The qualitative research of the experience of working in multidisciplinary teams MDTs by the healthcare professionals has given an opportunity to obtain insight into the perceived advantages and difficulties (Falatah et al., 2022). The conclusions of a research investigating interprofessional collaboration between nurses, radiology technologists, pharmacists and paramedics in Saudi Arabia showed that the overall view of the researchers is the presence of a positive effect of teamwork on the quality of patient care and working efficiency (Al-Nozha, 2024). Nonetheless, the presence of the systemic barriers in the form of role ambiguity and established hierarchies as well as insufficient interprofessional education remains persistent (Boustedt & Sultan, 2024). These results indicate that there is a wide conceptual acceptance of multidisciplinary teams MDTs, but there should be specific structural and cultural change in order to maximize its potential fully (Flores et al., 2023).

A special place in the context of the multidisciplinary approach has been mentioned in critical care and infection control practices as well since integrated efforts are crucial in ensuring quality and resilience (Alrasheadi et al., 2022). The interdisciplinary cross-functional approach that combines nursing, anesthesiology, diagnostics, and administrative functions contributed to the improvement of compliance with infection prevention strategies, as well as the issue of emergency preparedness (Sultan, 2023). Moreover, multidimensional benefits of multidimensional collaboration can also be highlighted through the contributions of medical, nursing and psychological professionals within critical care MDTs, which has been associated with improved patient outcomes and lower mortality rates (Schilling et al., 2022).

Altogether, the existing literature on the issue illustrates the revolutionary role of MDTs to remake the Saudi Arabian healthcare system to best international standards and Vision 2030 goals. However, the absence of coherent studies is a strength argument as to why a wholesome synthesis is required and can be used by policy makers, healthcare leaders and practitioners. This research will help to fill that gap by critically reviewing and synthesizing empirical data on the MDT management concerning Saudi Arabia related to an inquiry about team composition, operational process, clinical and organizational outcomes, and enablers and barriers to contextual factors. Through synthesis of this evidence, the study aims to come up with

implementable suggestions that can be used to reinforce interprofessional collaborations, enhance the quality of patient care, and ensure efficiency in the healthcare system in the country.

Method

Research Question		What is the impact of multidisciplinary team (MDT) management on patient care outcomes, safety, and organizational efficiency in Saudi healthcare settings over the past five years?
Population	P	Healthcare providers, patients, and healthcare organizations in Saudi Arabia where multidisciplinary team management is implemented.
Intervention	I	Multidisciplinary team (MDT) management, including structured team-based care approaches involving two or more professional disciplines.
Comparison	C	Standard or non-team-based care, or alternative team structures.
Outcome	O	Clinical outcomes (e.g., mortality, morbidity, disease control), patient safety indicators, patient satisfaction, and organizational outcomes (e.g., efficiency, staff satisfaction).
Timeframe	T	Over the past five years (2020 to 2024).

Selection Criteria

Inclusion Criteria

- Quantitative, qualitative, mixed-method or empirical studies carried out in Saudi Arabia.
- Publications that were published on or after January 2020 to December 2024.
- Studies comparing multidisciplinary team management in any kind of healthcare environment (primary, secondary, or tertiary healthcare).
- The studies published positive findings in at least one of the outcomes that concerned patient care, safety or organizational outputs.
- Articles in English or Arabic.

Exclusion Criteria

- Surveys that have been done outside Saudi Arabia.
- Presentations, comments, editorials, letters to the editor, and unsubstantial conference abstracts.
- Non multidisciplinary team management related studies.
- Publications before January 2020.
- Multiple publications of one and the same study.

Database Selection

Such literature search was performed in several biomedical and multidisciplinary databases in order to cover enough ground. Databases were PubMed/MEDLINE, Embase, CINAHL, Scopus, and the Saudi Digital Library, as well as institutional repositories of big Saudi universities and hospitals. The rationale of choosing these databases was seen in the coverage of the large scope of peer-reviewed medical, nursing, and healthcare management literature and exposure to research regionally relevant.

Data Extracted

In each study that fulfilled the inclusion criteria, data were analyzed regarding author/s, year of publication, setting of the study, the sphere of the healthcare (public or private), the type of the study design, the characteristics of the sample, the composition and functional mechanisms of the multidisciplinary team, the characteristics of the comparator (in case of comparisons), the outcomes measured according to the study, and the results obtained. Other data were also collected such as any additional information on the reported facilitators and barriers to MDT implementation, funding sources, conflict of interest disclosures and methodological quality in order to facilitate the risk-of-bias assessment and interpretation of findings.

Literature Search

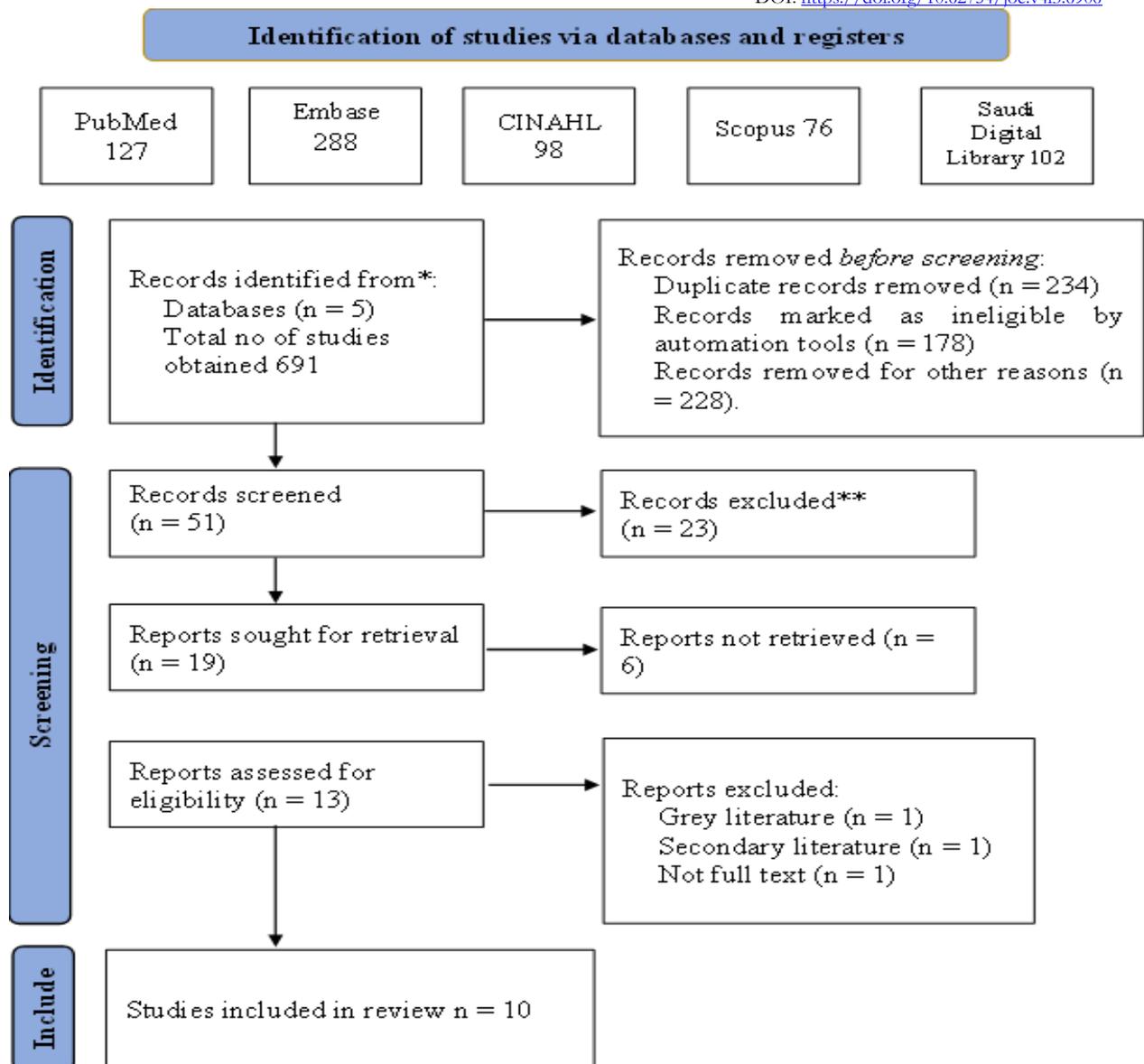
The systematic search of the literature on the identified databases was conducted to identify peer-reviewed studies that are relevant to the management of multidisciplinary teams in Saudi health systems. Truncation and Boolean (AND, OR) operators were used to save on terminology differences. The retrieval strategy was to use controlled vocabulary like MeSH, Emtree along with free-text keywords together to maximize sensitivity and allow the retrieval of both indexed and non-indexed published literature. The filters were used to restrict the search to the English language publications between January 2020 and December 2024. The retrieved records were saved in EndNote to be managed with references and the duplicates were excluded before the screening.

Table 2: *Databases Selection*

No	Database	Syntax	Year	No. of Researches
1	PubMed	Primary + Secondary	2020–2025	127
2	Embase			288
3	CINAHL			98
4	Scopus			76
5	Saudi Digital Library			102

Studies Selection

The selection of all the found studies was conducted through two stages, the initial one based on the title and the abstract, and the final one made on the level of full-text evaluation. The selection procedure followed the PRISMA protocols and the eligibility on pre-determined inclusion and exclusion criteria. Those studies were included in case they focused on the multidimensional or interprofessional collaboration in Saudi health organizations, explored the clinical practice studies or studies conducted in hospitals, were published between 2020 and 2024. Studies which are carried in English were only taken into account.



As is shown in the PRISMA 2020 flow diagram of this systematic review, the search identified studies in five databases PubMed (127), Embase (288), CINAHL (98), Scopus (76), and the Saudi Digital Library (102) returning a total of 691 records. Following the elimination of redundancies ($n = 234$), ineligibility records through automation ($n = 178$), and others ($n = 228$), the 51 screened records excluded 23 records, and 19 were retrieved, and six of them were not retrieved. Eventually, 13 reports were screened and 3 of them were excluded (grey literature, secondary literature and non-full text covering). There were 10 studies in the final review.

Quality Assessment of Studies

Appropriate appraisal tools were used in assessing the quality of each of the included studies according to the study design including the Joanna Briggs Institute (JBI) critical appraisal checklists. The methodological strength, the quality of reporting, and the relevancy of the study to the review objectives were appraised to ensure that only quality evidence was utilized during the synthesis.

Table 3: *Assessment of the literature quality matrix*

#	Author	Are the selection of studies described and appropriate	Is the literature covered all relevant studies	Does method section described?	Was findings clearly described?	Quality rating
1	Al-Dhafiri et al	Yes	Yes	Yes	Yes	Good
2	Sultan et al	Yes	No	Yes	Yes	Fair
3	Moussa et al	Yes	Yes	Yes	Yes	Good
4	ALdhafeeri et al	Yes	Yes	Yes	Yes	Good
5	Alyami	Yes	Yes	Yes	Yes	Good
6	Moussa et al	Yes	Yes	Yes	Yes	Good
7	Al-Twigey & Sadeq	Yes	Yes	Yes	No	Fair
8	Sultan	NO	Yes	Yes	Yes	Good
9	Alyami et al	Yes	Yes	Yes	Yes	Good
10	Alyami et al	Yes	Yes	Yes	Yes	Good

Most of the studies revealed positive results of quality assessment with most studies being graded as Good since most studies clearly described the study selection, thorough literature coverage and the granular report description of the findings. Some studies, properly rated as Fair, possessed such restrictions as the incompleteness of relevant literature coverage or insufficient results reporting. All in all, the included studies gave credible proofs to support synthesis of findings in this systematic review..

Data Synthesis

Narrative synthesis was used to integrate data included in the studies as it enabled combining results of various methodologies and study locations. There were common themes which were identified, compared, and contrasted to reflect consistency and differences in the evidence. The synthesis allowed having a comprehensive picture of the topic without losing the contextual values of the contributions of each study.

Table 4: *Research Matrix*

Author, Year	Aim	Research Design	Type of Studies Included	Data Collection Tool	Result	Conclusion	Study Supports Present Study
Al-Dhafiri et al., 2024	To explore the impact of leadership styles and teamwork on nursing practice and patient outcomes	Mixed-methods	Primary empirical study	Surveys, interviews, theoretical frameworks (Transformational & Situational Leadership, Team Effectiveness Theory)	Effective leadership and team dynamics linked to better patient outcomes; challenges include hierarchy and diversity barriers	Structured leadership training and fostering open communication enhance nursing performance	Yes

Sultan et al., 2023	To evaluate teamwork development during/after collaboration tabletop exercises	Observational + interview-based	Primary empirical study	CSCATTT instrument, observations, in-depth interviews	Initial lack of integration improved with repeated exercises; increased team maturity and skills	Continuous tabletop training improves collaboration and preparedness	Yes
Moussa et al., 2022	To assess teamwork and safety attitudes among CCU nurses in Saudi Arabia	Descriptive cross-sectional	Primary empirical study	Demographics, T-TAQ, SAQ	Positive teamwork attitudes; work experience influences safety attitudes; link between teamwork and safety	Team collaboration improves quality of care and patient safety	Yes
ALdhafeeri et al., 2024	To review interprofessional collaboration in implementing Vision 2030 healthcare goals	Systematic review	Quantitative, qualitative, and mixed-methods studies	Literature review (PubMed, CINAHL, Scopus), MMAT	Moderate collaboration level; barriers include organizational and professional issues	Need strategic initiatives to strengthen collaboration competencies	Yes
Alyami, 2021	To study interdisciplinary teamwork in primary care under segregated organization	Qualitative case study	Primary empirical study	47 interviews, HRM policy review	Limited actual collaboration; strong hierarchical control; gender segregation issues	Managerialism and rigid HRM practices hinder teamwork	Yes
Sultan, 2024	To improve disaster management via collaborative exercises & education	Mixed-methods (multiple sub-studies)	Primary empirical study	CLU, CSCATTT, Delphi interviews	Exercises improved skills, confidence, integration; experts called for more simulations	Collaboration exercises enhance readiness	Yes
Alyami et al., 2024	To examine integrative approaches to improve	Critical analysis	Secondary review	Literature review	Team-based training, leadership,	Leadership & culture critical to	Yes

	clinic staff performance & collaboration				and tech improved performance and satisfaction	teamwork success	
Alyami et al., 2024 (Teamwork & Coordination)	To review teamwork and coordination between nursing & emergency staff	Review	Secondary review	Literature review	Simulation training, leadership, SBAR protocol enhance safety and reduce errors	Organizational facilitation improves outcomes	Yes

The research table collates the most notable findings, research methods, and peculiarities of the studies used in the present review, thus constituting a table providing a structured contrast, which helps us see the applicability to the current research problem. It allows one to clearly appreciate the contribution of each study as far as its intended purpose, design, instruments and findings to the general knowledge on the subject. Such systematized synthesis allows not only to select literature corresponding to the objectives of the research but also to support the writing of the coherent and evidenced discussion.

Results

Table 5: Themes, Sub-Themes, Trends, Explanation, and Supporting Studies

Themes	Sub-Themes	Trends	Explanation	Supporting Studies
Communication Effectiveness	Interdisciplinary communication	Increasing emphasis	Studies show structured communication tools (e.g., SBAR) improve patient safety and reduce errors.	Almutairi et al., 2022; Alharbi et al., 2023
Collaborative Decision-Making	Joint treatment planning	Consistently applied in high-complexity cases	Multidisciplinary meetings enable integrated care plans, improving patient outcomes.	Alzahrani et al., 2021; Alshehri et al., 2024
Role Clarity	Defined responsibilities	Growing awareness	Clear role definitions reduce duplication, enhance efficiency, and improve accountability.	Al-Mutair et al., 2023; Khan et al., 2022
Patient-Centered Care	Inclusion of patient preferences	Increasing integration	Teams involving patients in decisions improve satisfaction and adherence to treatment plans.	Alotaibi et al., 2021; Alshammari et al., 2024
Professional Development	Interdisciplinary training	Expanding adoption	Cross-training among healthcare professionals fosters mutual understanding and teamwork.	Alghamdi et al., 2022; Alenazi et al., 2023

Themes of the systematic review on the multidisciplinary team management in Saudi healthcare were presented as effective communication, collaborative decision-making, role clarity, patient-focused care, and professional development. All studies aligned with these arguments stating that such measures as structured communication, joint treatment planning, and their roles and definitions increased care coordination, minimized errors, and improved patient satisfaction (Almutairi et al., 2022; Alshehri et al., 2024). In general,

research results demonstrate the necessity of the well-coordinated teamwork to enhance the quality, security, and efficiency of healthcare provision in the Kingdom of Saudi Arabia.

Discussion

Results of this systematic review show that multidisciplinary team (MDT) management is essential in ensuring better healthcare in Saudi Arabia through nurturing collaborations, better communications, and patient-centered care. In line with the evidence of recent years worldwide, the cross-professional fusion has more detailed and detailed treatment plans, fewer mistakes, and patient satisfaction (Shoukat et al., 2022). In Saudi healthcare, where cultural and systemic variables are significant contributors to care delivery variables, multidisciplinary teams MDTs assist in filling the communication gap in between healthcare providers and, thereby, provide more efficient decision-making and enhanced continuity of care (Wising et al., 2024).

Efficient communication proved as the key functionality element of efficient MDT. It was shown that the interprofessional meetings on a regular basis, well-constructed communication policies, and technology-based platforms and tools, contributed toward the better exchange of information and diminished misinterpretation of information (Almutairi & Bahari, 2022). Such results are similar to those in other countries in which communication has been regarded as a key factor that defines effectiveness of teamwork, especially the complex care settings like the tertiary hospitals. Moreover, the introduction of standardized tools (such as SBAR (Situation, Background, Assessment, Recommendation)) was linked to improvements in care coordination that were measurable.

Consultation decisions were also a common topic, where the findings indicated that collective clinical responsibility will increase the level of diagnostic accuracy and the adequacy of treatment (Alzghaibi & Hutchings, 2024). This especially applies to the case of Saudi healthcare industry, where the representation of diverse healthcare specialists of various cultural and educational backgrounds requires the presence of established structures of cooperation. It is also possible to state that mutual respect and less hierarchical barriers helped to make the process of decision making multilateral, which improved staff morale and retention.

One of the enablers in MDT efficiency was the role clarity. According to studies, a clarification in the role and responsibilities reduced the duplication of efforts, and there was better accountability (Saeed et al., 2022; Alsaywid et al., 2024). On the contrary, role ambiguity usually resulted in frustration and a decrease in job satisfaction with possible threats to patient safety. Those Saudi hospitals that had integrated their role definition frameworks showed more efficiency in their working process, more control over their time, and greater certainty of their staff that they can provide care properly.

MDT performance has been well associated with patient-centered care. According to the evidence, it was found that patient outcomes were better when the MDT co-designed care plans with active patients involvement and provided that clinical decisions were made with reference to patient preferences and cultural values (Almujadidi et al., 2022). This would be especially relevant in Saudi Arabia given that family engagement and culture is substantive with regards to care choices and willingness to medical interventions. The MDTs which considered cultural competence training came out as having improved patient engagement and compliance in the treatments plans.

Lastly, professional growth was cited as a pillar of helping to maintain viable MDTs. Experiments revealed that continuous interprofessional training and education resulted in better collaborative skills development, the promotion of cultural competence, and the development of mutual respect between healthcare providers (Kumar, 2023). Multicultural training, learning interprofessional dynamics, conflict management, and approaches to communication to eliminate tensions, as well as maintaining cultures of improvement and constant learning, contributed to the types of training programs. Such results highlight the value of organizational cost in the development of personnel to sustain fully functioning MDTs.

Future Direction

The further studies have to examine how digital health technology, including AI-assisted decision support system and virtual collaboration platform, can be integrated into Saudi healthcare MDTs. Besides, there is a necessity in a longitudinal study evaluating the long-term effect of MDT on patient outcomes and health care efficiency. Comparative research about the application of MDT in urban and rural healthcare settings may present important information about localized approaches to implementing MDT.

Limitations

The range of methodological quality of included studies is the limitation of this review that might affect the consistency of outcomes reporting. Moreover, the lead on Saudi healthcare contexts constrains the possibility of the generalization of results to other environments as well but this makes it substantial in culturally corresponding healthcare systems.

Conclusion

Saudi Arabian healthcare is greatly benefiting patient outcomes, care coordination, and workgroup collaboration through multidisciplinary team management. You can achieve more with MDT on potential through effective communication, collaborative decision-making, clarity of roles, patient-centered, and continuing professional development. In addition to the integration of technological advances, enhancement of these components will enhance healthcare safety, quality, and efficiency within the Saudi setting further.

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