DISSERTATION REPORT

at

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TITLE

Optimizing Clinical Decision-Making: Assessing Acceptance, and Limitations of Clinical Decision Support Systems in a Cross-Sectional Study in two multispecialty hospitals in India

BY

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PG/21/42

Under the guidance of

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PGDM (Hospital and Health management)

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International Institute of Health Management Research, New Delhi

MENTOR'S APPROVAL CERTIFICATE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Jayati Bansal** student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at **Wolters Kluwer** from **12 January 2023 to 15 April 2023**

The Candidate has successfully carried out the study designated to him during internship training and his/her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfilment of the course requirements.

I wish her all success in all her future endeavours.

Dr. Sumesh Kumar
Associate Dean, Academic and Student Affairs
IIHMR, New Delhi

Mentor
IIHMR, New Delhi

DISSERTATION COMPLETION CERTIFICATE

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Date: 25 May 2023

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This is to certify that Ms. Jayati Bansal has satisfactorily completed her Internship Project in Market Research Project in Health with Wolters Kluwer India Private Limited from 12 Jan 2023 to 15 Apr 2023

During her Internship period she was paid a stipend of INR 25000 per month.

We wish her success in all his future endeavors.

Yours sincerely
On behalf of Wolters Kluwer India Pvt. Ltd.

Lisa Christy
Director, Human Resources

FEEDBACK FORM

FEEDBACK FORM

Name of the Student: Jayati Bansal

Name of the Organisation in Which Dissertation Has Been Completed: Wolters Kluwer India

Area of Dissertation: Market Research

Attendance: 100%

Objectives achieved: very well & vergtuicly met (5Star)

Deliverables: Met with utmost Hardwork.

Strengths: Analytics & Problem Solving.

Suggestions for Improvement: Need to Polish skills more.

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):

Nowes

Certificate of Approval

The following dissertation titled **"optimizing clinical decision making: Assessing acceptace and limitation of clinical decision support system in a cross sectional study in two multispecialty hospitals in india"** at **"Wolters Kluwer Private Ltd"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name	Signature
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DR. SUMESH KUMAR	

PLAGIARISM REPORT

ORIGINALITY REPORT

14%	11%	7%	8%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

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CHAPTER-1- OVERVIEW

INDUSTRY PROFILE

The healthcare industry plays a critical role in the well-being of individuals and communities, with a primary focus on providing quality care and improving patient outcomes. In recent years, evidence-based healthcare software has emerged as a vital tool within this industry. These software solutions are designed to support healthcare professionals in making informed decisions by integrating the best available evidence from research, clinical guidelines, and patient data.

Evidence-based healthcare software offers numerous benefits to both healthcare providers and patients. By utilizing robust data analytics and advanced algorithms, these software systems can help clinicians streamline workflows, enhance diagnostic accuracy, and optimize treatment plans. They provide a wealth of information at the fingertips of healthcare professionals, facilitating evidence-based decision-making and reducing the potential for errors or inefficiencies.

Moreover, evidence-based healthcare software empowers patients to actively participate in their own care. Through user-friendly interfaces and access to personalized health information, patients can become better informed about their conditions, treatment options, and self-management strategies. This promotes patient engagement and shared decision-making, leading to improved patient satisfaction and health outcomes.

The healthcare industry is a complex and dynamic field that constantly strives to provide high-quality care and improve patient outcomes. Evidence-based healthcare software has emerged as a crucial component in this pursuit. These software solutions leverage the latest research, clinical guidelines, and patient data to support healthcare professionals in making well-informed decisions.

One of the key benefits of evidence-based healthcare software is its ability to enhance clinical decision-making. By providing access to comprehensive databases of medical literature, clinical trials, and best practices, these software solutions equip healthcare professionals with up-to-date information and evidence-based recommendations. This enables them to make more accurate diagnoses, develop tailored treatment plans, and deliver targeted interventions.

Furthermore, evidence-based healthcare software facilitates efficient and streamlined workflows. These tools automate various processes, such as data collection, analysis, and reporting, saving valuable time for healthcare professionals. By reducing administrative burdens and enabling seamless data integration, these software solutions enable clinicians to focus more on patient care and improve overall efficiency.

Another significant advantage of evidence-based healthcare software is its potential to standardize care practices and promote consistency. By integrating evidence-based guidelines and protocols into the software, healthcare organizations can ensure that all clinicians are following the same evidence-based approaches. This helps eliminate variations in care and improves patient safety, leading to better overall outcomes.

Moreover, evidence-based healthcare software plays a critical role in patient engagement and education. These tools empower patients by providing access to personalized health information, educational resources, and self-management tools. Patients can actively participate in their own care, make informed decisions, and take steps to improve their health outcomes.

The integration of evidence-based healthcare software also has broader implications for healthcare systems as a whole. By leveraging data analytics and population health management capabilities, these software solutions can help identify trends, patterns, and gaps in care delivery. This enables healthcare organizations to make data-driven decisions, allocate resources effectively, and implement targeted interventions to improve population health. In summary, evidence-based healthcare software has become a cornerstone in the healthcare industry, transforming the way healthcare professionals deliver care and engage with patients. By providing access to the latest evidence, streamlining workflows, standardizing care practices, and empowering patients, these software solutions have the potential to enhance clinical outcomes, improve efficiency, and drive positive change throughout the healthcare ecosystem.

ORGANISATION PROFILE

Wolters Kluwer is a global information services company that provides professional solutions in various industries, including healthcare, tax and accounting, legal and regulatory compliance, finance, and risk management. With its headquarters in Alphen aan den Rijn, the Netherlands, Wolters Kluwer operates in over 180 countries and serves customers in more than 180 countries.

In the healthcare domain, Wolters Kluwer offers a range of innovative products and services that support healthcare professionals in delivering high-quality care. Their solutions include evidence-based clinical decision support tools, drug information databases, medical research platforms, medical education resources, and compliance and regulatory solutions for healthcare organizations. With a strong commitment to leveraging technology and expertise, Wolters Kluwer continues to innovate and develop cutting-edge solutions that enable professionals to make informed decisions, improve productivity, and navigate complex regulatory environments effectively.

Overall, Wolters Kluwer's diverse portfolio of professional solutions and its global presence have established the company as a trusted partner for professionals across industries, empowering them with the knowledge and tools necessary to succeed in their respective fields.

Here are some key areas where Wolters Kluwer operates within the healthcare industry:

1. Clinical Decision Support: Wolters Kluwer provides evidence-based clinical decision support tools that assist healthcare professionals in making accurate and timely decisions at the point of care. These tools offer up-to-date medical information, drug databases, clinical guidelines, and interactive algorithms that help clinicians diagnose conditions, determine appropriate treatments, and ensure patient safety.
2. Medical Research and Education: Wolters Kluwer's health solutions include platforms and resources for medical research, education, and publishing. These offerings support medical professionals, researchers, and educators in accessing medical literature, conducting research, and staying updated with the latest advancements in their respective fields. They also provide medical education materials, online learning platforms, and continuing education resources for healthcare professionals to enhance their knowledge and skills.
3. Clinical Documentation and Coding: Wolters Kluwer offers solutions that assist healthcare providers in accurate clinical documentation and coding, ensuring compliance with regulatory requirements and optimizing reimbursement. These tools provide coding guidelines, coding software, and documentation improvement solutions to streamline coding processes, reduce errors, and maximize revenue capture.
4. Compliance and Regulatory Solutions: Wolters Kluwer provides healthcare organizations with compliance and regulatory solutions that help them navigate complex regulatory environments, ensure adherence to industry standards, and mitigate compliance risks. These solutions include tools for managing healthcare compliance programs, staying updated with regulatory changes, and maintaining comprehensive compliance documentation.
5. Patient Engagement and Health Management: Wolters Kluwer's solutions also focus on patient engagement and health management. They offer patient education materials, interactive patient portals, and remote monitoring solutions that empower patients to actively participate in their healthcare, manage chronic conditions, and make informed decisions about their treatment plans.

VISION

Wolters Kluwer's vision is to be the leading global provider of trusted, essential solutions that help professionals make confident decisions, achieve better outcomes, and drive their organizations forward.

MISSION

Wolters Kluwer's mission is to empower professionals to effectively navigate complex regulatory environments, enhance productivity, and deliver quality outcomes through its innovative information, software, and service solutions.

VALUES

1. Customer Focus: Wolters Kluwer is committed to understanding and exceeding customer expectations. They strive to provide valuable solutions and exceptional service that meet the unique needs of their customers, enabling them to succeed in their professional endeavors.
2. Innovation: Wolters Kluwer embraces innovation as a driving force behind its success. They foster a culture of continuous improvement, encourage creative thinking, and invest in cutting-edge technologies to develop new and better solutions that address evolving market needs.
3. Expertise: Wolters Kluwer leverages its deep domain expertise and extensive knowledge in multiple industries to deliver high-quality, accurate, and reliable information and solutions. They are dedicated to providing expert insights, trusted content, and practical guidance that professionals can rely on to make informed decisions.
4. Integrity: Wolters Kluwer upholds the highest ethical standards and values integrity in all aspects of its business. They are committed to transparency, honesty, and maintaining the trust of their customers, partners, and stakeholders.
5. Collaboration: Wolters Kluwer believes in the power of collaboration and partnerships. They actively seek opportunities to collaborate with customers, industry experts, and thought leaders to co-create solutions that address complex challenges and deliver value to their clients.
6. Diversity and Inclusion: Wolters Kluwer values diversity and inclusion as essential elements of its success. They strive to foster an inclusive work environment that embraces different perspectives, backgrounds, and experiences, enabling their teams to thrive and deliver innovative solutions.
7. Social Responsibility: Wolters Kluwer is dedicated to being a responsible corporate citizen. They aim to make a positive impact on society through their solutions, employee volunteerism, sustainability efforts, and corporate social responsibility initiatives.

CHAPTER 2- PROJECT OUTLINE

TITLE

Optimizing Clinical Decision-Making: Assessing Acceptance, and Limitations of Clinical Decision Support Systems in a Cross-Sectional Study in a multispecialty hospital in India.

INTRODUCTION

Computerized clinical decision support systems, or CDSS, represent a paradigm shift in healthcare today, CDSS are used to augment clinicians in their complex decision-making processes.[1] A clinical decision support system (CDSS) is intended to improve healthcare delivery by enhancing medical decisions with targeted clinical knowledge, patient information, and other health information.[1] Clinical decision support systems (CDSSs) have been hailed for their potential to reduce medical errors and increase health care quality and efficiency. At the same time, evidence-based medicine has been widely promoted as a means of improving clinical outcomes, where evidence-based medicine refers to the practice of medicine based on the best available scientific evidence. The use of CDSSs to facilitate evidence-based medicine therefore promises to substantially improve healthcare quality.[2]

CDSS systems can improve medication safety by providing recommendations relating to dosing, administration frequencies, medication discontinuation and medication avoidance. Moreover, these novel systems can improve the quality of prescribing decisions by triggering alerts or warning messages on drug duplication, contraindications, drug interaction errors, side-effects and inappropriate medication orders.[3] CDSS can help ensure that healthcare providers comply with medical regulations and standards. By providing recommendations based on clinical guidelines, CDSS can help ensure that patients receive care that meets established standards. It can also help healthcare providers work more efficiently by providing real-time information about patient care. This can help reduce the time and resources needed to make informed decisions, allowing healthcare providers to focus on other aspects of patient care.

The involvement of patients even within the framework of CDSS-based decision-making processes appears to have a positive influence on them. The patients felt better informed and felt clearer about their treatment wishes and goals, which probably results in a more active role in decision-making and a more precise risk perception.[4]

Overall, doctors in India have shown a positive attitude towards using digital platforms for gaining evidence-based solutions. Many see digital platforms as a way to stay updated on the latest medical research and treatments, which can help them provide better care to their patients. The convenience of accessing these resources from their smartphones or computers is also seen as a major advantage, particularly in rural areas where access to traditional medical libraries and resources may be limited.

KEYWORDS

Clinical Decision support system, Evidence-Based Medicine, Targeted clinical knowledge

OBJECTIVE

1. To understand the usage of Clinical Decision Support Systems among physicians
2. To understand and assess the limitations of Clinical Decision Support Systems among physicians
3. To understand and assess acceptance of Clinical Decision Support Systems among physicians

METHODOLOGY

Study design- Cross- Sectional study
Study Period- The study would be conducted from 20th January 2023 till 30th March 2023
Study setting and population- Gurgaon, Doctors of multispecialty hospital (Max multispecialty hospital & Fortis memorial research institute)
Sampling Method- Exhaustive Sampling Method
Method of data collection- Google form survey is used as a method of data collection.

DATA COLLECTION

Data collected using a google questionnaire.

STATISTICAL ANALYSIS

Descriptive statistics were utilized to analyze the demographic information of the participants and their corresponding responses across different categories in the questionnaires.

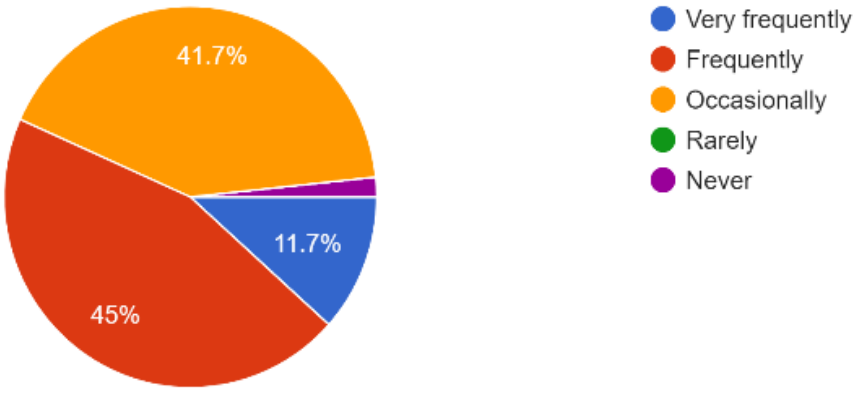
RESULTS

A total of 85 questionnaires were distributed, and 60 doctors (representing 70% of the total) returned them. The study included participation from various specialties, with 15 internal medicine doctors, 13 pediatric doctors, 10 obstetrics and gynecology doctors, 9 surgery doctors, and 13 doctors from other specialties. Table 1 presents a visual representation of the participants' demographic information of the clinical decision support system in the study.

TABLE:1

Parameters	Demographic Information	Count
Doctor	Internal Medicine	15
	Pediatric Doctors	13
	Obstetrics and Gynecology	10
	Surgery doctors	9
	Other Specialties	13

HOW FREQUENTLY DOES A CLINICIAN ENCOUNTER **COMPLEX** CLINICAL CASES IN THEIR PRACTICE



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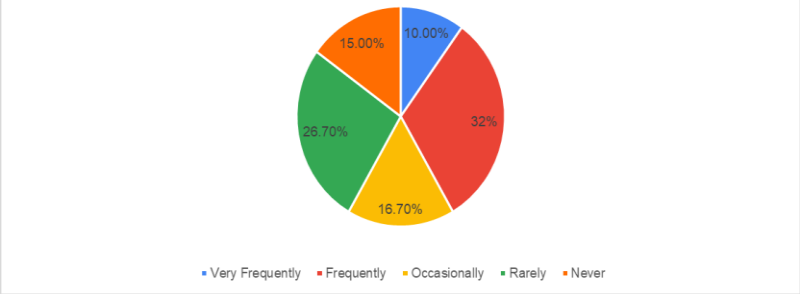
DESCRIPTION

It can be inferred that a majority of the respondents (45%) encounter complex clinical cases **frequently** in their practice. An additional 41.7% reported encountering such cases **occasionally**, indicating a substantial proportion facing complex cases to some degree. However, it is worth noting that a small percentage (1.7%) reported **never** encountering complex cases. This suggests that while the majority of healthcare professionals are regularly exposed to complex clinical scenarios, there is a minority who experience them infrequently. This knowledge assessment highlights the need to optimize clinical decision-making through the utilization of effective tools, such as Clinical Decision Support Systems, to assist healthcare professionals in managing complex cases and ensuring high-quality patient care.

USAGE ASSESMENT

Have you ever used a CDSS in your medical practice?



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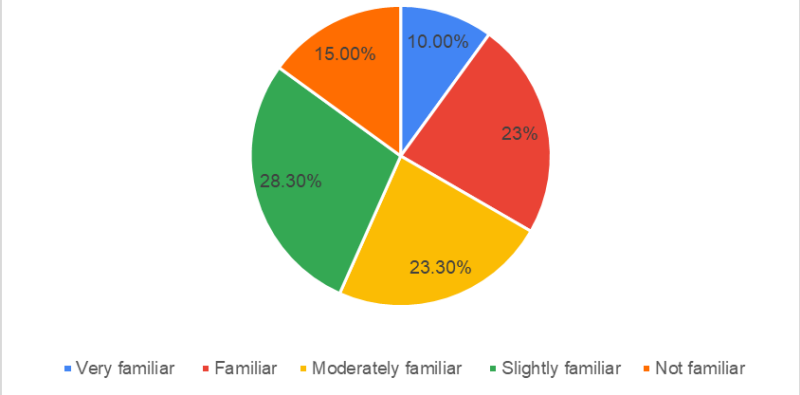
How familiar are you with the concept of CDSS?



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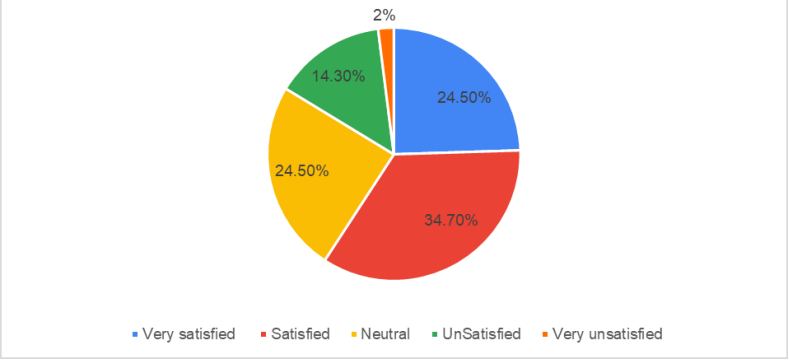
How satisfied are you with the current CDSS tools available?



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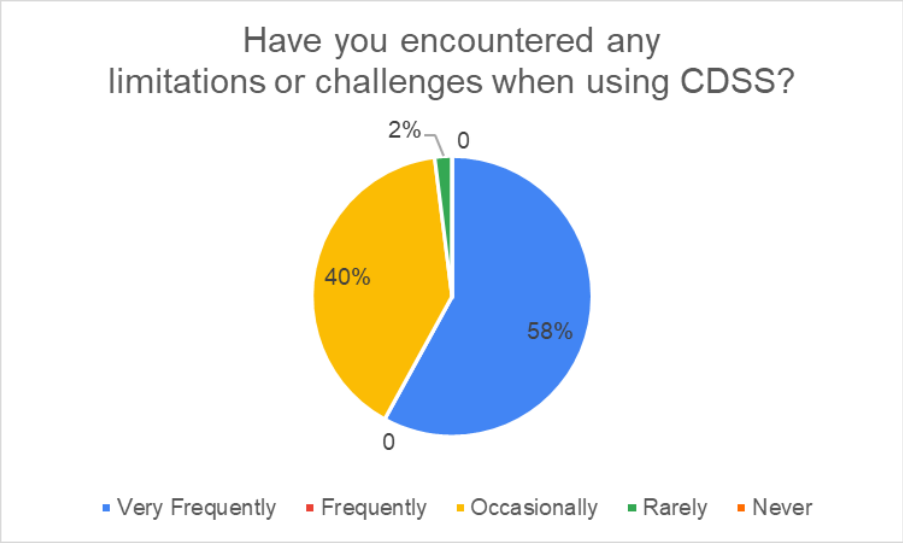
Questions	Very Frequently	Frequently	Occasionally	Rarely	Never
Have you ever used a Clinical Decision Support System (CDSS) in your medical practice?	10.00%	32%	16.70%	26.70%	15.00%
	Very familiar	Familiar	Moderately familiar	Slightly familiar	Not familiar
How familiar are you with the concept of CDSS?	10.00%	23%	23.30%	28.30%	15.00%
	Very satisfied	Satisfied	Neutral	UnSatisfied	Very unsatisfied
On a scale of 1 to 5, how satisfied are you with the current CDSS tools available?	24.50%	34.70%	24.50%	14.30%	2%

USAGE ASSESSMENT DESCRIPTION

The data presented indicates that a substantial portion of respondents have not used a Clinical Decision Support System (CDSS) in their medical practice, with 16.7% reporting occasional usage and 26.7% indicating rare and 15% indicating no usage. Among those who have used CDSS, satisfaction levels vary, with 24.5% expressing neutral satisfaction (rating 3 on a scale of 1 to 5) and 24.5% reporting higher satisfaction (ratings 5 on a scale of 1 to 5). Furthermore, a significant proportion (10%) of respondents are highly familiar with the concept of CDSS, while 15.0% of respondents are not familiar with the concept of CDSS. These findings suggest an opportunity to improve CDSS knowledge among doctors and healthcare professionals and address limitations, ensuring greater satisfaction among users and supporting healthcare professionals in managing complex cases effectively. Further research is warranted to explore the specific factors influencing satisfaction and the impact of CDSS on clinical decision-making.

LIMITATION ASSESSMENT



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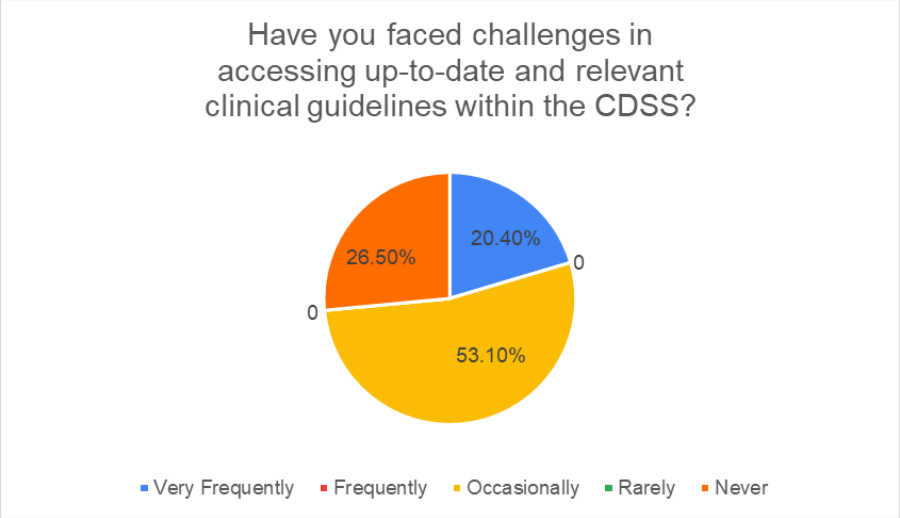

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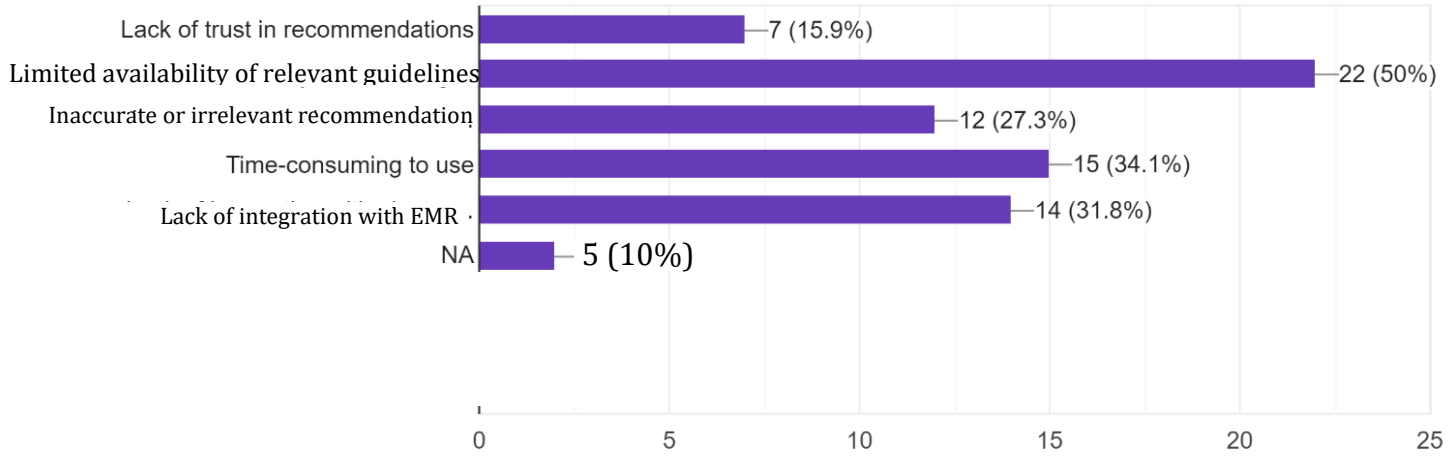
Questions	Very Frequently	Frequently	Occasionally	Rarely	Never
Have you encountered any limitations or challenges when using CDSS?	58%	N/A	40%	2%	N/A
Have you faced challenges in accessing up-to-date and relevant clinical guidelines within the CDSS?	20.40%	N/A	53.10%	N/A	26.50%

LIMITATIONS THAT CLINICIANS HAVE ENCOUNTERED WHILE USING CDSS.



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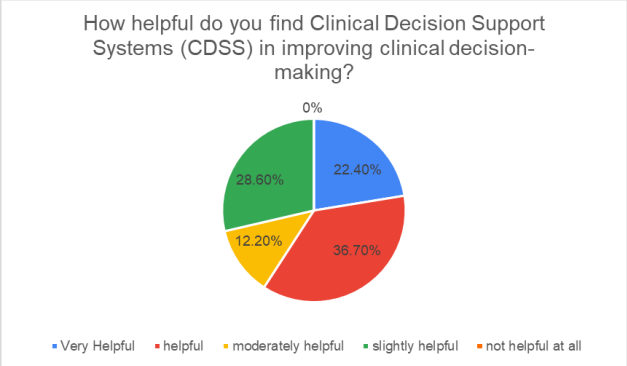
LIMITATION ASSESSMENT DISCRIPTION

The data reveals that a significant percentage of respondents (20.4%) have faced challenges in accessing up-to-date and relevant clinical guidelines within the Clinical Decision Support System (CDSS). This indicates a notable limitation in the availability and accessibility of current guidelines within the CDSS platforms. Furthermore, a substantial proportion (58%) reported encountering limitations or challenges when using CDSS. These findings underscore the importance of addressing the accessibility and relevance of clinical guidelines within CDSS tools, as well as overcoming other challenges to maximize the potential benefits of CDSS in clinical decision-making. Further research and efforts are necessary to improve the integration of up-to-date guidelines and enhance the usability of CDSS, ultimately optimizing its impact on patient care and clinical outcomes.

ACCEPTANCE ASSESSMENT



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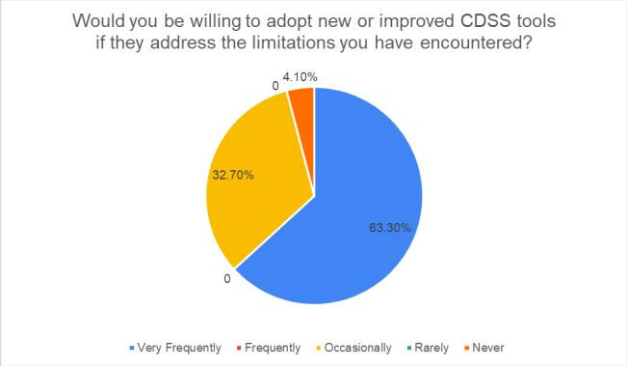

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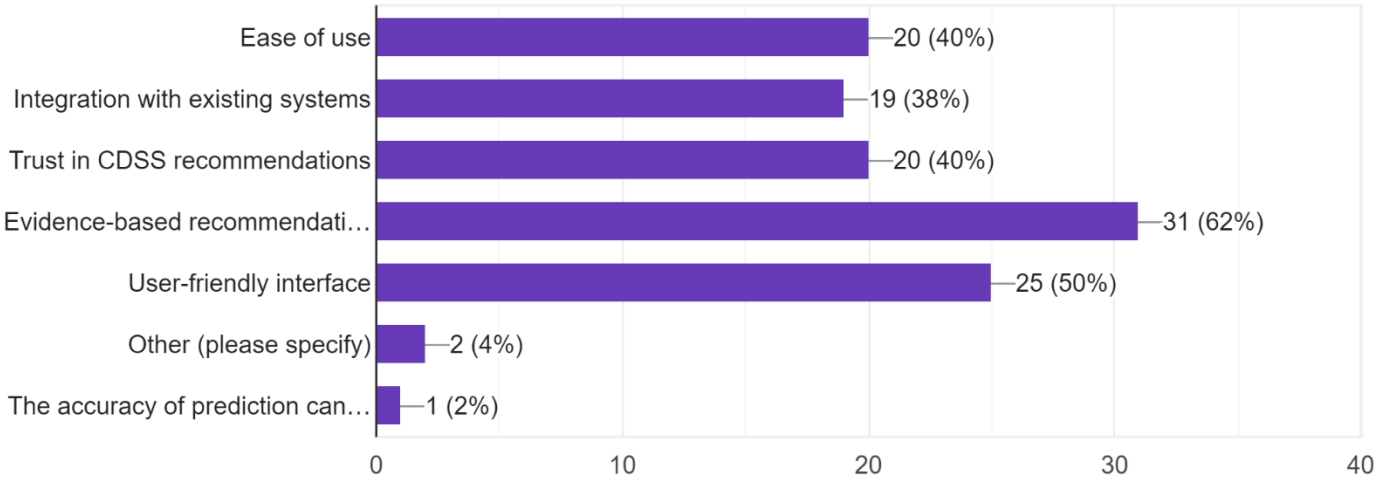
Questions	Very Helpful	helpful	moderately helpful	slightly helpful	not helpful at all
How helpful do you find Clinical Decision Support Systems (CDSS) in improving clinical decision-making?	22.40%	36.70%	12.20%	28.60%	0%
	Very Frequently	Frequently	Occasionally	Rarely	Never
Would you be willing to adopt new or improved CDSS tools if they address the limitations you have encountered?	63.30%	N/A	32.70%	N/A	4.10%

ACCEPTANCE ASSESSMENT DESCRIPTION

The data provided indicates that a majority of respondents perceive Clinical Decision Support Systems (CDSS) as helpful in improving clinical decision-making, with 22.4% reporting very helpful and 36.7% reporting helpful utilization. Additionally, 12.2% of respondents finds CDSS moderately helpful for decision-making support. However, a notable proportion (28.6%) reported less/slightly useful usage of CDSS. Regarding the willingness to adopt new or improved CDSS tools, a significant majority (63.3%) expressed openness to adopting such tools if they address encountered limitations. This highlights a positive attitude towards leveraging technological advancements to optimize clinical decision-making processes. These findings emphasize the potential benefits of CDSS and the importance of addressing limitations to further enhance its acceptance and utilization among healthcare professionals

FACTORS THAT **INFLUENCE** THE ACCEPTANCE OF CDSS.



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DESCRIPTION

The acceptance of Clinical Decision Support Systems (CDSS) in healthcare relies on various factors that shape users' perceptions and willingness to embrace the technology. Among these factors, **ease of use and integrating with existing systems hold significant weight, accounting for 40% and 38%** of influence, respectively. **Trust in CDSS recommendations, an essential aspect, also plays a significant role, garnering 40%** acceptance. The importance of evidence-based recommendations cannot be overstated, as it holds the **highest influence at 62%.** User-friendly interfaces contribute to 50% of acceptance, ensuring a seamless and intuitive experience. While other factors may impact acceptance to a lesser extent (4%),

DISCUSSION

The data highlights that a significant portion of respondents have either not used CDSS or have reported rare usage. This indicates a need to address barriers to adoption and utilization. Furthermore, a substantial proportion of respondents reported facing challenges in accessing up-to-date clinical guidelines within CDSS, underscoring the need for improved availability and accessibility. Satisfaction levels among CDSS users varied, with a notable proportion expressing moderate to high levels of satisfaction. This suggests that CDSS has the potential to positively impact clinical decision-making. However, it is crucial to address limitations and enhance the user experience to further improve acceptance and utilization among healthcare professionals.

The data indicates that a significant proportion of respondents frequently encounter complex clinical cases. This underscores the importance of utilizing effective tools like CDSS to assist healthcare professionals in managing these cases more effectively. CDSS can provide valuable support in navigating the complexities of clinical decision-making and improving patient outcomes. The findings highlight the need for further research and efforts to improve CDSS functionality, such as integrating up-to-date clinical guidelines and addressing the identified limitations and challenges. Enhancements in usability, integration with electronic health records, and accuracy of recommendations can contribute to optimizing CDSS usage and maximizing its potential benefits.

The majority of respondents expressed a willingness to adopt new or improved CDSS tools if they address the encountered limitations. This positive attitude signifies an opportunity for technological advancements in CDSS to better meet the needs and expectations of healthcare professionals. It is crucial to leverage this openness to drive future innovations and advancements in CDSS design and implementation.

LIMITATION

The small sample size in this study is one of its potential flaws. All of the respondents were doctors at multispecialty hospital where the study was conducted. This restricts the generalizability of the findings to a larger population of doctors. The sample may not be representative of the broader medical community, as doctors from different hospitals or regions may have varying perspectives and practices relating to CDSS Therefore, caution should be exercised when extrapolating the results of this study to other healthcare settings. Additionally, focusing solely on the doctor's perspective may limit the comprehensive understanding of the software. While doctors play a crucial role, other stakeholders such as patients, pharmacists, and healthcare administrators also influence the utilization and acceptance of the software. Including multiple perspectives could provide a more holistic view of the challenges and opportunities associated.

CONCLUSION

The data analysis reveals important insights regarding the utilization, limitations, and acceptance of Clinical Decision Support Systems (CDSS) among healthcare professionals. While a significant portion of respondents have not used CDSS in their practice, those who have utilized it reported varying levels of satisfaction. The findings highlight the need to address challenges related to accessing up-to-date clinical guidelines and overcoming limitations within CDSS platforms. Despite these limitations, a majority of respondents perceive CDSS as helpful in improving clinical decision-making. The willingness to adopt new or improved CDSS tools indicates a positive attitude towards leveraging technological advancements to optimize decision-making processes. These findings emphasize the potential benefits of CDSS and the importance of further research and improvement efforts to maximize its impact on patient care.

Furthermore, the study findings shed light on the potential implications of integrating CDSS into healthcare practices. The positive perception of CDSS as a helpful tool in improving clinical decision-making signifies the recognition of its ability to augment the expertise and knowledge of healthcare professionals. By providing evidence-based recommendations, CDSS has the potential to reduce errors, enhance diagnostic accuracy, and optimize treatment plans. This not only benefits individual patients but also contributes to overall healthcare quality and outcomes.

The study also emphasizes the importance of ongoing research and improvement efforts in the field of CDSS. Addressing the challenges related to accessing up-to-date clinical guidelines and overcoming limitations within CDSS platforms is crucial for maximizing its impact. Collaborative efforts between technology developers, healthcare professionals, and researchers are essential in refining CDSS systems, ensuring their accuracy, relevance, and usability.

Moreover, the willingness of healthcare professionals to adopt new or improved CDSS tools highlights a progressive attitude towards embracing technological advancements in healthcare. This willingness reflects a recognition of the potential benefits that technology can bring to their practice and the importance of continuously evolving and adapting to advancements in the field.

In conclusion, the study underscores the significance of CDSS in healthcare and the need for further research and improvement. By addressing challenges, enhancing accessibility, and refining CDSS platforms, healthcare professionals can leverage this technology to make more informed, evidence-based decisions, ultimately improving patient care, outcomes, and overall healthcare delivery. Continued efforts to advance CDSS will pave the way for a future where technology and human expertise work synergistically to optimize healthcare decision-making and ultimately benefit patients and healthcare systems as a whole.

CONFLICT OF INTEREST

Conflict of interest are non-existent

REFERENCES

1. Sutton R., Pincock D., Baumgart D., Sadowski D., Fedorak R., Kroeker K. An overview of clinical decision support systems: benefits, risks, and strategies for success. https://www.nature.com/articles/s41746-020-0221-y

2. Sim I., Clinical Decision Support Systems for the Practice of Evidence-based Medicine. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC130063/pdf/0080527.pdf

3. Medic G., Evidence-based Clinical Decision Support Systems for the prediction and detection of three disease states in critical care: A systematic literature review. https://f1000research.s3.amazonaws.com/manuscripts/23644/0042aea4-d32a-4406-aea2-efffe9ffbb9f_20498_-_goran_medic_v2.pdf?doi=10.12688/f1000research.20498.2&numberOfBrowsableCollections=89&numberOfBrowsableInstitutionalCollections=4&numberOfBrowsableGateways=50

4. Teufel A., Binder H., Clinical Decision Support Systems

https://www.karger.com/Article/Pdf/519420