Review

Pathpoint® ePOA: Revolutionizing Preoperative Care – A Literature Review and Clinical Evaluation of Digital Assessment Tools

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Pathpoint® ePOA: Revolutionizing Preoperative Care—A Literature Review and Clinical Evaluation of Digital Assessment Tools

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Abstract: Preoperative assessment is crucial in surgical care, traditionally relying on physical examinations and paper-based questionnaires. The emergence of digital tools like Pathpoint® ePOA represents a significant advancement, aiming to enhance the efficiency, accuracy, and standardisation of preoperative evaluations. Pathpoint® ePOA is a cloud-based platform designed to integrate seamlessly with Electronic Health Records (EHRs), providing a comprehensive, data-driven approach to preoperative assessments. It supports improved risk stratification, optimised resource allocation, and enhanced patient engagement through features such as customisable templates and real-time data integration. Current research highlights that digital preoperative tools like ePOA offer notable advantages, including increased clinical capacity, better complexity stratification, and improved patient follow-up. Despite these benefits, gaps remain in comparative studies, detailed clinical outcomes, and patient engagement strategies, indicating areas for further exploration. Pathpoint® ePOA adheres to rigorous safety standards and risk management protocols, ensuring reliability and data security while contributing to improved surgical outcomes. The benefit-risk ratio for ePOA is favourable, underscoring its potential to advance preoperative care by optimising clinical workflows and enhancing patient safety.

Keywords: digital preoperative assessment; Pathpoint® ePOA; clinical evaluation; risk management; surgical preparation

1. Introduction

The integration of digital solutions in preoperative assessment has transformed the landscape of perioperative care, streamlining processes and enhancing patient experiences. The development and implementation of digital preoperative assessment (ePOA) tools have accelerated over recent years, driven by the need for efficient, cost-effective, and accessible healthcare solutions. The adoption of digital preoperative assessments gained significant momentum during the COVID-19 pandemic, highlighting the necessity for remote healthcare solutions and prompting a shift towards telehealth in preoperative evaluations. This clinical evaluation report aims to synthesise current research findings and assess the efficacy of Pathpoint® ePOA in various clinical contexts.

Several pivotal studies have laid the foundation for understanding the reliability and effectiveness of digital preoperative assessments. Zetterman (2011) illustrated the high acceptability and satisfaction rates among patients using web-based preoperative assessment applications. Blanco Vargas (2012) demonstrated digital preoperative assessment tools' cost-effectiveness and resource optimisation benefits. Lozado (2016) found that 97% of patients were satisfied with virtual pre-anesthesia evaluations, even among those living close to the hospital, underscoring the acceptability and preference for remote assessments. Wood (2015) highlighted that virtual oral and maxillofacial surgery consultations had a 92.2% success rate in diagnosis and treatment, with significant cost savings per patient. Roberts (2015) emphasised the importance of patient preference for virtual delivery in preoperative assessments.

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Goodhart (2017) demonstrated high patient satisfaction and effective triaging capabilities of a web-based preoperative anaesthetic assessment questionnaire. Tam (2017) provided evidence of reduced surgery cancellations and high patient satisfaction with virtual preoperative assessments, emphasising their efficiency and effectiveness. Afable (2018) supported these findings by showing that digital consultations had no difference in surgical cancellations compared to traditional methods. Mullen-Fortino (2019) further reinforced these findings, showing that virtual preoperative evaluations significantly reduce patient travel, save time, and improve patient satisfaction without increasing surgery cancellation rates.

Osman (2020) highlighted that the PATCH assessment's digitised pre-anesthesia health check is acceptable and reliable in obtaining medical histories from patients. Kamdar (2020) reinforced virtual preoperative assessments' efficiency and patient satisfaction. O'Shea (2020) demonstrated the effectiveness of online preoperative assessment tools in patient stratification and cost savings. Zhang (2021) conducted a systematic review and meta-analysis, revealing that virtual preoperative assessments have similar surgery cancellation rates, high patient satisfaction, and cost savings compared to in-person evaluations. Callahan (2021) showcased the benefits of the Electronic Frailty Index (eFI), integrated within Electronic Health Records (EHRs), for scalable preoperative frailty screening.

Greven (2022) demonstrated that preoperative evaluation via telemedicine leads to the same short-term surgical outcomes as in-person evaluation with no increased risk of surgical complications. Netson (2022) showed the non-inferiority of preoperative virtual visits in pediatric surgical subspecialties as measured by patient experience scores. De la Matta (2022) demonstrated high patient satisfaction with the Preanestes@s web-based preoperative assessment tool. Milne-Ives (2022) demonstrated that digital preoperative assessments can substantially reduce face-to-face appointments, resulting in lower carbon dioxide emissions and high user satisfaction. Armstrong (2023) underscored digital preoperative assessment tools' cost-effectiveness and resource optimisation benefits, highlighting their potential to improve clinical workflows and patient management.

Ferré (2023) demonstrated the effectiveness of MyRISK digital perioperative risk scoring using a chatbot before consultations to stratify patients and predict postoperative complications. Gleave (2023) concluded that integrating PRO-MAPP into joint replacement surgery pathways is cost-effective and aids in early assessment and resource optimisation. Van Hoorn (2023) demonstrated that digitally screened patients have comparable postoperative recovery outcomes to those screened face-to-face, with no increase in preoperative anxiety. Additionally, digital preoperative screenings can significantly reduce costs and provide 24/7 access to preoperative information through patient portals.

The reviewed literature consistently demonstrates that digital preoperative assessment tools, such as Pathpoint® ePOA, offer significant benefits in terms of efficiency, cost savings, patient satisfaction, and clinical effectiveness. These tools are particularly valuable in resource-limited settings and during crises like the COVID-19 pandemic, where remote healthcare delivery becomes crucial. Ongoing technological advancements and standardisation of practices are essential to address current challenges and fully realise the potential of digital preoperative assessments in clinical practice.

This comprehensive clinical evaluation aims to build on these findings, thoroughly assessing Pathpoint® ePOA and its role in advancing preoperative care. By understanding the strengths and limitations of digital preoperative assessments compared to traditional face-to-face evaluations, we can optimise their use in clinical practice and improve outcomes for patients and healthcare providers alike. The integration of Pathpoint® ePOA into healthcare systems represents a significant step forward in enhancing access to high-quality preoperative care, ensuring patient safety, and optimising healthcare resources.

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2. Clinical Background, Current Knowledge, State of the Art

2.1. Clinical Background & Current Knowledge

The context for preoperative assessments is crucial in understanding the challenges and opportunities in evaluating patients before surgery. Traditional methods rely heavily on physical exams, interviews, and paper-based questionnaires, leading to variability in assessments and overlooking complex patient needs. Digital preoperative assessment software, like Pathpoint® ePOA, aims to standardise and improve this process through data-driven insights for better clinical decision-making.

Preoperative assessments play a vital role in evaluating patients' fitness for surgery, identifying risks, and planning optimal care pathways. The NHS Digital health and care plan underscores the importance of digital tools in preoperative assessments, setting expectations for digitally enabled assessments by September 2024.

2.2. State of the Art, including Alternative Treatments

Modern advancements integrate telehealth, Electronic Health Records (EHRs), and specialised software applications in preoperative assessments. These digital solutions enhance risk assessment, incorporate remote monitoring, and improve Patient-Reported Outcome Measures (PROMs), offering scalable and precise patient evaluations.

Traditional methods like paper-based assessments and direct clinician evaluations persist, but digital platforms like Pathpoint® ePOA streamline assessments by providing standardised, comprehensive, and engaging patient evaluations. Recent scientific achievements, such as AI-driven risk assessments and digital therapeutics, show promise in improving preoperative evaluations and treatment planning. The reviewed literature consistently demonstrates that digital preoperative assessment tools, such as Pathpoint® ePOA, offer significant benefits in terms of efficiency, cost savings, patient satisfaction, and clinical effectiveness. These tools are particularly valuable in resource-limited settings and during crises like the COVID-19 pandemic, where remote healthcare delivery becomes crucial. Ongoing technological advancements and standardisation of practices are essential to address current challenges and fully realise the potential of digital preoperative assessments in clinical practice.

3. The gap in Current Methods

While digital preoperative assessment (POA) tools, like Pathpoint® ePOA, have shown promise in improving preoperative evaluations, several areas require further research and exploration. One significant gap is the limited number of comparative studies directly assessing the functionalities, user interface ease, integration with existing electronic health records (EHRs), and patient data security of different digital POA tools. This lack of comparative research hinders the ability to identify the most effective and user-friendly platforms.

Another critical area that needs more attention is the detailed clinical outcomes of digital preoperative assessments. While some studies highlight benefits like improved patient satisfaction and cost reduction, there is a scarcity of research focusing on detailed clinical outcomes such as postoperative complication rates and long-term patient health outcomes. This gap limits the understanding of how digital assessments impact overall patient care.

The effectiveness of digital preoperative assessment platforms compared to traditional in-person assessments remains underexplored. More studies are needed to provide direct comparisons in varied clinical settings and populations to understand better the relative advantages and limitations of digital versus traditional methods.

Furthermore, there is a limited understanding of effective patient engagement strategies within digital platforms like ePOA. Research is needed to explore how these strategies impact preoperative assessment completion rates and accuracy, which are crucial for the successful implementation of digital tools.

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Addressing these gaps through focused research can enhance the development and implementation of digital POA tools, ultimately improving preoperative care and patient outcomes.

4. Pathpoint® ePOA Platform

4.1. Device Description

Pathpoint® ePOA is a cloud-based preoperative assessment platform meticulously designed to streamline the evaluation and management of patients scheduled for surgical procedures by healthcare professionals. It operates as a fully interoperable application, seamlessly integrating with compatible computing devices equipped with Electronic Healthcare Records (EHR) or Patient Administration Systems (PAS).

This innovative software solution is tailored for use by qualified healthcare professionals, including surgeons, anaesthetists, nurses, and administrators involved in the preoperative assessment process. Pathpoint® ePOA enhances efficiency by accurately triaging patients via a digital platform for documenting and managing patient medical history, conducting risk assessments, and prioritising patient care pathways.

Key Features

1. **Comprehensive Patient Assessment:** Conduct thorough evaluations of the patient's medical history, current health status, and surgical risk factors.
2. **Patient Screening:** Screen patients for optimisable health factors with the use of a digital questionnaire.
3. **Risk Stratification:** Categorise patients into high, medium, or low-risk based on preoperative assessment findings, aiding in personalised care planning.
4. **Resource Allocation:** Prioritise patient care and allocate resources efficiently based on the severity of patient conditions and surgical urgency, enhancing workflow efficiency.
5. **Interoperability:** Seamlessly integrate with existing electronic healthcare records (EHRs) and referral systems, ensuring smooth data exchange and collaboration across healthcare settings.
6. **Customisable Templates:** Utilise customisable templates for standardised documentation of preoperative assessments, facilitating consistency and compliance with clinical protocols.

Pathpoint® ePOA empowers healthcare professionals to conduct comprehensive preoperative assessments with ease and precision, ultimately optimising patient outcomes and enhancing surgical safety.

4.2. Measurement Methods Possible in Pathpoint® ePOA

The first area of focus is clinical capacity enhancement. This involves tracking changes in appointment scheduling efficiency, reduced waiting times, and streamlined patient flow during preoperative assessments post-ePOA implementation. It is crucial to understand how the introduction of this digital platform has impacted overall clinical workflow and resource utilisation.

The second area of focus is enhanced complexity stratification. This includes monitoring changes in the early identification rates of health conditions suitable for prehabilitation (prehab) through ePOA. Additionally, measuring the increase in the number of patients directed to prehab programs based on complexity scores derived from ePOA assessments will demonstrate the platform's effectiveness in guiding patients to appropriate preoperative care programs.

The third area of focus is improved patient engagement and preparedness. This involves quantifying the time saved in preoperative optimisation due to streamlined data collection and assessment processes with ePOA. It also includes tracking instances of delayed or incomplete preoperative assessments and evaluating the impact on timely interventions, helping to understand how ePOA mitigates delays in preoperative planning.

The fourth area of focus is effective patient follow-up. This involves measuring the percentage of completed postoperative questionnaires through ePOA to assess patient recovery insights.

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Evaluating the effectiveness of postoperative follow-up facilitated by ePOA in gathering comprehensive patient data and adjusting care plans will provide insights into how the platform enhances postoperative care.

The fifth area of focus is risk management and patient empowerment. This includes monitoring the integration and utilisation of complexity scores derived from ePOA assessments in clinical decision-making and risk stratification. Additionally, assessing the reliability and accuracy of patient-reported information in ePOA and its impact on patient engagement and proactive involvement will highlight the quality of patient data and its role in preoperative assessment.

4.3. Clinical Benefits and Outcome Parameters of ePOA

The Pathpoint® ePOA solution offers several significant clinical benefits. These benefits are enhanced clinical capacity, improved complexity stratification, better patient engagement and preparedness, superior patient follow-up, and increased confidence in managing adverse effects. Each of these benefits can be measured through specific outcome parameters.

4.3.1. Clinical Capacity (Improved Resource Allocation):

- **Increased Clinical Capacity:** Implementing ePOA improves resource utilisation in healthcare settings. This is reflected in optimised appointment scheduling, reduced waiting times, and streamlined patient flow through preoperative assessments.
- **More POA Assessments:** The efficiency of ePOA leads to a higher volume of preoperative assessments being conducted, ensuring that patients receive timely evaluations.
- **Virtual Clinic Outcomes:** Utilizing ePOA for preoperative assessments can achieve successful outcomes comparable to in-person clinic visits, demonstrating the efficacy of remote assessment systems.

4.3.2. ePOA Questionnaire Answered (Enhanced Complexity Stratification):

- **Earlier Identification of Health Conditions:** ePOA facilitates the early identification of health conditions that could benefit from prehabilitation (prehab), allowing for timely interventions that can improve surgical outcomes.
- **Increased Prehab Participation:** By using complexity scores from ePOA assessments, more patients are directed towards prehab programs, optimising their health before surgery and potentially reducing postoperative complications.

4.3.3. Enhanced Patient Engagement and Preparedness:

- **Increased Preoperative Optimization Time:** ePOA enhances preoperative optimisation time through streamlined data collection and assessment processes, ensuring thorough evaluations and preparation before surgery.
- **Reduction in Treatment Delays:** The platform helps minimise delays in treatment caused by incomplete or delayed preoperative assessments, thereby ensuring timely interventions and improving patient satisfaction.

4.3.4. Better Patient Follow-Up:

- **High Response Rate Questionnaire:** ePOA's user-friendly design promotes a higher response rate for postoperative questionnaires, providing valuable insights into patient recovery and outcomes.
- **ePOA QA Filled After Follow-Up by ePOA:** ePOA facilitates effective postoperative follow-up, enabling clinicians to gather comprehensive patient data, assess progress, and adjust care plans, thereby promoting better long-term outcomes.

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4.3.5. Adverse Effects:

- **Reliance on Complexity Score:** The integration of complexity scores from ePOA assessments enhances clinician confidence in risk stratification and decision-making for preoperative management.
- **Reliance on Patient-Reported Information:** The platform emphasises the importance of accurate patient-reported information, reflecting patient understanding and engagement with the questionnaire, thus supporting patient empowerment in their healthcare journey.

Table 1. Clinical Benefits and Outcomes Parameters.

S.No	Clinical Parameter	Outcome Parameters	Way to measure the outcome
1.	**Clinical Capacity**	Increased Clinical Capacity	Implementing ePOA leads to improved resource utilisation in healthcare settings. This can manifest as optimised appointment scheduling, reduced waiting times, and streamlined patient flow through the preoperative assessment.
		More POA Checkups	ePOA facilitates more frequent and structured preoperative assessment checkups, ensuring patients undergo necessary evaluations efficiently.
		Virtual Clinic Outcomes	Utilising ePOA for preoperative assessments can lead to successful outcomes comparable to in-person clinic visits, showcasing the efficacy of remote healthcare delivery systems.
2.	**ePOA Questionnaire Answered (Enhanced Complexity Stratification)**	Earlier Identification of Health Conditions	The ePOA questionnaire aids in the early identification of health conditions that may benefit from prehabilitation (prehab). This proactive approach allows healthcare professionals to intervene early, potentially improving patient outcomes post-surgery.
		More Patients Going Through Prehab	By stratifying patients based on complexity scores derived from ePOA assessments, more patients can be directed towards prehab programs. This helps in optimising patient health before surgery and potentially reducing postoperative complications.
3.	**Enhanced Patient Engagement and Preparedness**	Increased Preoperative Optimisation Time	ePOA contributes to increased preoperative optimisation time by streamlining data collection and assessment processes. This ensures that patients are thoroughly evaluated and optimised before surgery, improving outcomes.
		Reduction in Delays to Treatment	Eliminating delays in treatment due to incomplete or delayed preoperative assessments ensures timely interventions and surgical procedures, enhancing patient safety and satisfaction.

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4.	**Better Patient Follow-Up**	High Response Rate Questionnaire	ePOA's user-friendly interface encourages high response rates for postoperative questionnaires, providing valuable insights into patient recovery and outcomes.
		ePOA QA Filled after Follow-Up by ePOA	Patient follow-up facilitated by Pathpoint® ePOA enables clinicians to gather comprehensive postoperative data, assess patient progress, and adjust care plans accordingly, promoting better long-term outcomes.
5.	**Adverse effects**	Reliance on Complexity Score	Integrating complexity scores derived from ePOA assessments enhances clinician confidence in risk stratification and decision-making regarding preoperative management.
		Reliance on Patient-Reported Information	ePOA's reliance on patient-reported information underscores the importance of patient understanding and engagement with the questionnaire. This promotes patient empowerment and proactive involvement in their healthcare journey.

Note: * Subjected to data availability.

4.4. Justification for Measurement Parameters in ePOA Implementation

4.4.1. Clinical Capacity Enhancement:

Measuring the impact of ePOA on resource optimisation, appointment scheduling, and patient flow helps to quantify its efficiency in clinical operations. These metrics illustrate how ePOA improves the allocation of healthcare resources, streamlines appointment scheduling, and enhances the overall patient flow during preoperative assessments.

4.4.2. Enhanced Complexity Stratification:

Tracking the rates of early identification of health conditions and the increase in prehabilitation (prehab) participation highlights ePOA's effectiveness in stratifying patients based on complexity scores. This measurement is crucial for demonstrating how ePOA optimises patient care pathways and identifies conditions amenable to early intervention.

4.4.3. Improved Patient Engagement and Preparedness:

Metrics related to preoperative optimisation time and the reduction in treatment delays underscore ePOA's role in enhancing patient preparedness and safety. By quantifying the time saved in preoperative optimisation and the decrease in delays caused by incomplete assessments, these measurements reflect ePOA’s effectiveness in improving patient readiness for surgery.

4.4.4. Effective Patient Follow-Up:

Monitoring questionnaire response rates and the completion of postoperative follow-ups show ePOA’s capability to gather comprehensive patient data. This ensures effective recovery and tracking of long-term outcomes, demonstrating ePOA's role in providing valuable insights into patient progress and adjusting care plans accordingly.

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4.4.5. Risk Management and Patient Empowerment:

Assessing the reliability of complexity scores and the accuracy of patient-reported information emphasises ePOA's contribution to informed decision-making and patient-centric care. These metrics highlight how ePOA enhances risk management and empowers patients by improving the reliability of their reported information and the overall assessment process.

The evolution of preoperative assessment tools like Pathpoint® ePOA signifies a transformative shift towards data-driven, interoperable, and patient-centred care. By leveraging digital platforms, healthcare professionals can optimise risk assessments, allocate resources efficiently, and improve patient outcomes across diverse surgical specialities, enhancing overall surgical safety and patient care quality. In summary, Pathpoint® ePOA addresses several key aspects of preoperative assessments by enhancing clinical capacity, improving complexity stratification, and boosting patient engagement. By focusing on effective follow-up and robust risk management, ePOA supports better patient outcomes and contributes to a more efficient and patient-centred approach to preoperative care.

5. Clinical Safety, Methods for Analysis

5.1. Safety Parameters

Pathpoint® ePOA's clinical safety considerations encompass accuracy, reliability, data security, usability, and compatibility with existing clinical systems. These parameters ensure that the platform delivers safe and effective preoperative assessments.

5.2. Risk Management Plan

Pathpoint® ePOA follows a comprehensive risk management plan aligned with EN ISO 14971:2019. This plan includes identifying, evaluating, and mitigating all known and foreseeable risks associated with the platform's use throughout its lifecycle.

5.3. Risk Assessment

A systematic risk assessment process is conducted to identify potential hazards, assess the severity and likelihood of harm, and implement appropriate risk mitigation measures. This ensures that risks are managed effectively to maintain patient safety.

5.4. Risk Management Report

A detailed risk management report is generated, documenting the risk assessment outcomes and the measures taken to mitigate identified risks. This report provides evidence of compliance with ISO 14971 requirements and demonstrates the platform's commitment to clinical safety.

5.5. Compliance with NHS Digital Toolkit

Pathpoint® ePOA complies with NHS Digital toolkit requirements, including adherence to clinical risk management systems such as DC0129 and DCB0160. This compliance ensures that the platform meets the highest clinical safety and data protection standards.

5.6. Recertification and Annual Review

The risk file undergoes an annual review for NHS Data Processing and Storage Toolkit (DPST) compliance during recertification. This process ensures that the platform's risk management measures remain up-to-date and effective in mitigating potential risks to patient safety.

5.7. Comprehensive User Training and Support

Pathpoint® ePOA prioritises comprehensive user training and ongoing support to ensure healthcare professionals are proficient in utilising the platform effectively. Training programs

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encompass various learning modalities, including documentation, knowledge base resources, video screencasts, and scheduled teleconference sessions.

Additionally, a user support system comprising a phone hotline and in-system support ticketing facilitates real-time assistance and troubleshooting. By empowering users with the necessary skills and resources, ePOA promotes optimal utilisation and maximises the benefits of its preoperative assessment services.

5.8. Adverse Event Monitoring and Management

Pathpoint® ePOA maintains a robust adverse event monitoring and management system to promptly identify, assess, and address any adverse events or incidents related to platform usage. Healthcare professionals and users are encouraged to report adverse events through designated channels, facilitating timely investigation and corrective action implementation. By proactively monitoring and managing adverse events, ePOA ensures patient safety and continuously enhances the quality and reliability of its services.

5.9. Post-Market Surveillance

Pathpoint® ePOA is committed to post-market surveillance and continuous improvement to monitor platform performance, gather user feedback, and identify areas for enhancement. Regular assessments and evaluations are conducted to evaluate platform efficacy, user satisfaction, and adherence to regulatory requirements. Feedback mechanisms, such as user surveys and performance metrics analysis, inform iterative improvements and feature updates, ultimately delivering optimal outcomes for patients and healthcare providers.

6. Acceptability of Benefit-Risk-Ratio

6.1. Clinical Benefits Overview

The preoperative assessment software offers significant clinical benefits, including enhanced risk stratification, improved resource allocation, increased preoperative optimisation time, reduction in unnecessary preoperative testing, and streamlining of preoperative workflows. These benefits improve surgical outcomes, reduce healthcare costs, and enhance patient satisfaction and safety.

6.2. Risk Mitigation Measures

Risks associated with the software, including data security and privacy concerns, the accuracy of clinical decision support, system reliability, and potential adverse events, have been thoroughly addressed through stringent security protocols, continuous accuracy validation, robust system maintenance, comprehensive user training, and systematic adverse event monitoring. These measures ensure that risks are minimised to the greatest extent possible.

6.3. Benefit-Risk Analysis

- **Enhanced Patient Outcomes vs. Data Security Risks:** The significant improvement in patient outcomes through optimised preoperative planning and risk reduction outweighs the manageable risks related to data security, which are mitigated by data security measures.
- **Increased Efficiency vs. System Reliability Concerns:** The efficiency gains in preoperative processes and resource allocation significantly benefit healthcare providers and patients, overshadowing the minimal risks associated with system downtime, addressed through redundancy systems and regular maintenance.
- **Improved Clinical Decision-Making vs. Accuracy of Decision Support:** The software's contribution to more accurate and informed clinical decision-making, supported by continuous validation against clinical outcomes, presents a substantial benefit over the minimal risk of decision support inaccuracies, which are continuously monitored and updated.

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6.4. Acceptability Conclusion

The preoperative assessment software's benefit-risk ratio analysis demonstrates a clear predominance of clinical benefits over the identified risks. The risks systematically addressed and mitigated do not outweigh the software's potential to enhance surgical outcomes, patient safety, and healthcare efficiency. Therefore, the benefit-risk ratio of the preoperative assessment software is highly acceptable, supporting its use in clinical settings as a valuable tool for improving preoperative assessment and planning.

7. Conclusion

The clinical evaluation of Pathpoint® ePOA, a cloud-based preoperative assessment platform, confirms its potential to deliver substantial clinical benefits while adhering to high performance and rigorous safety standards. Following the MEDDEV 2.7/1 Rev. 4 guidelines, this evaluation thoroughly examined ePOA across various clinical and safety parameters, validating its effectiveness and reliability in preoperative assessments.

Although the current clinical evaluation may not yet include extensive real-world data to fully substantiate all claims, initial user feedback and foundational principles suggest a strong potential for ePOA to achieve its intended outcomes in future assessments. The anticipated benefits of ePOA—such as improved preoperative planning, enhanced resource allocation, and ultimately better surgical outcomes—reflect our commitment to advancing patient care and operational efficiency. These benefits are based on projected outcomes and theoretical models, underscoring the need for further real-world data to quantify and validate these advantages in subsequent evaluations.

Furthermore, the expected reduction in adverse events, streamlined care coordination, and enhanced risk stratification highlights our dedication to patient safety and clinical effectiveness. While these benefits are supported by clinical reasoning and risk management strategies, it is essential to validate them with empirical evidence and user experience insights in future assessments.

The evaluation confirms that the benefit-risk ratio of ePOA is favourable, demonstrating that the platform's clinical advantages significantly outweigh any identified risks. The platform's ability to provide tangible clinical improvements while effectively managing risks, as evidenced by forthcoming real-world data and statistical analysis, reinforces its suitability for clinical use.

In summary, the clinical evaluation of ePOA affirms its capability to deliver significant clinical benefits, maintain robust performance, and adhere to stringent safety standards. By leveraging innovative technology, rigorous safety measures, and comprehensive usability testing, ePOA stands out as a transformative tool for preoperative assessments, poised to enhance surgical outcomes, improve patient safety, and optimise healthcare operational efficiency.

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