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Long-Term Evaluation of the Effects of An 'Internet Plus' Continuous Care Platform in Chronic Disease Management

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Abstract This study evaluated the long-term effects of the "Internet Plus" continuous care platform in chronic disease management, focusing on its impact on patient health outcomes and mental well-being. A pre-post intervention design was employed, recruiting 230 chronic disease patients from multiple primary care clinics. Data were collected through electronic health records, patient self-reports, and platform usage metrics. The results showed significant improvements in emergency visit frequency, hospital readmissions, symptom management, and treatment adherence among patients using the platform. The platform's monitoring and telemedicine capabilities helped patients better manage key health metrics, such as blood pressure and blood glucose levels, thereby enhancing self-efficacy. Additionally, its social support features and mental health resources significantly reduced patients' anxiety and loneliness, leading to an improved quality of life. This study provides an in-depth analysis of the long-term effectiveness of the 'Internet Plus' platform in chronic disease management, offering valuable insights for policymakers and healthcare providers.
Keywords Internet Plus; Chronic disease management; Continuous care; Self-management; Telemedicine

1 Introduction

The increasing prevalence of chronic diseases worldwide has created a significant demand for innovative healthcare solutions that can offer continuous, effective, and accessible management options. With the rapid advancement of digital technologies, the integration of internet-based platforms with traditional healthcare—often referred to as 'Internet Plus'-provides a promising approach to address this need. By facilitating real-time health monitoring, promoting self-management, and enabling efficient patient-provider communication, 'Internet Plus' platforms present a modern approach to improve the quality of chronic disease management. This study investigates the long-term effects of a continuous care model utilizing an "Internet Plus" platform in chronic disease management. It seeks to assess its impact on health outcomes, patient satisfaction, and overall healthcare service efficiency (Liu et al., 2023). Chronic diseases such as diabetes, cardiovascular diseases, and hypertension are major contributors to global morbidity and mortality, requiring ongoing management and support. However, traditional healthcare delivery models often fall short in providing the necessary continuity of care for these long-term conditions. Digital health interventions have emerged as viable alternatives to bridge this gap, with recent studies showing that internet-based platforms can improve patient outcomes by offering continuous, personalized care (Pu and Cai, 2024).

The 'Internet Plus' continuous care platform is an innovative approach combining traditional healthcare services with internet-enabled tools to deliver enhanced patient care. This platform typically includes features such as telemedicine consultations, digital self-management tools, and health monitoring capabilities. These digital interventions allow for improved patient engagement and enable healthcare providers to track health data in real-time, thus facilitating timely interventions and reducing complications associated with chronic diseases. For instance, studies indicate that platforms with data-sharing capabilities and remote health monitoring can significantly improve patient quality of life and reduce the risk of hospital readmissions (Opipari-Arrigan et al., 2020). Such platforms are particularly valuable in chronic disease management, where regular monitoring and timely medical adjustments are critical. Research has shown that platforms using real-time data monitoring,

patient education, and interactive communication features can effectively support patients in managing their conditions from home, reducing the burden on healthcare facilities and improving health behaviors (Yang et al., 2019).

This study aims to conduct a comprehensive evaluation of the long-term effects of the "Internet Plus" continuous care platform on chronic disease management. The objectives include assessing improvements in patient health outcomes, enhancements in self-management skills, and reductions in healthcare utilization. The findings will provide insights into the potential of "Internet Plus" platforms to support sustainable and efficient chronic disease care. By investigating factors such as patient adherence, satisfaction, and clinical outcomes, this research contributes to the ongoing development of digital health interventions tailored for chronic diseases. Ultimately, this study seeks to identify key benefits and challenges in implementing internet-based continuous care solutions to inform policy and practice, aiding healthcare providers in adopting evidence-based digital tools.

2 Overview of the 'Internet Plus' Continuous Care Platform

2.1 Definition and characteristics of the "Internet Plus" continuous care platform

Studies highlight that such platforms facilitate better self-management and reduce the frequency of adverse health events by enabling constant communication and intervention when necessary (Yan et al., 2019). By allowing patients to interact remotely with healthcare professionals, track their health metrics, and receive tailored advice, the "Internet Plus" continuous care model is positioned to enhance treatment adherence and reduce the burden on healthcare facilities. This platform also aligns with global healthcare trends that prioritize accessibility, cost-efficiency, and improved patient outcomes, especially for those in underserved areas or with limited access to in-person care (Yang et al., 2020). The "Internet Plus" continuous care platform can be defined as an integrative healthcare system that utilizes internet technologies to provide continuous, personalized, and data-driven healthcare services, especially suited for chronic disease management.

This model is characterized by several key features: accessibility, real-time data sharing, and patient-centric engagement. Accessibility is achieved through mobile applications and online portals that enable patients to connect with healthcare providers regardless of their location, making it particularly beneficial for those in remote or underserved regions. Real-time data sharing is another fundamental characteristic, facilitated through wearable devices and health monitoring applications that track vital health metrics like blood pressure, glucose levels, and heart rate. This allows healthcare providers to monitor patient health continuously and make timely interventions when necessary, thus reducing complications associated with chronic diseases. The patient-centric focus of the platform ensures that care is tailored to individual needs, increasing the relevance and efficacy of treatments. Research demonstrates that platforms with these characteristics significantly improve treatment adherence, reduce hospitalizations, and enhance overall patient satisfaction (Liu et al., 2023). By fostering regular engagement and empowering patients to take an active role in managing their health, the 'Internet Plus' platform represents a substantial shift towards proactive and personalized healthcare.

2.2 Platform functions and service model

The "Internet Plus" continuous care platform operates through a multi-functional service model designed to address various aspects of chronic disease management. Core functions typically include telemedicine consultations, patient education, real-time symptom monitoring, and tools for self-management. Telemedicine allows for remote consultations, enabling patients to seek medical advice without needing to visit a healthcare facility physically. This function is critical for managing chronic diseases, as it facilitates frequent interaction and adjustment to treatment plans based on real-time health data. The platform's educational component provides patients with access to medical resources and self-care guidelines, which are essential for helping them make informed decisions about their health (Yao et al., 2023).

Real-time symptom monitoring, powered by wearable technology, allows for continuous tracking of vital signs. This function enables healthcare providers to monitor trends in a patient's health metrics and promptly intervene if necessary. Finally, self-management tools such as medication reminders and lifestyle tracking support patients in adhering to their treatment regimens independently, which is a significant aspect of chronic disease management.

Research indicates that these combined functions significantly enhance healthcare outcomes, reducing hospital readmissions and fostering a more engaged patient population (Lear et al., 2021). By creating an interactive and supportive environment, the platform's service model emphasizes patient empowerment and proactive health management.

2.3 Advantages of the platform in chronic disease management

The "Internet Plus" platform provides several notable advantages in managing chronic diseases, particularly in terms of continuous access to healthcare, enhanced self-management capabilities, and potential cost reductions. Continuous access to care through this platform allows for timely interventions that can prevent complications, thus reducing emergency room visits and hospitalizations. Self-management tools embedded in the platform encourage patients to play an active role in their health, leading to better adherence to treatment protocols and positive health outcomes. The remote monitoring aspect of the platform is especially beneficial for patients with limited access to healthcare facilities, as it enables them to receive quality care and regular check-ups remotely (Gao and Li, 2019).

This model not only alleviates the pressure on healthcare resources but also promotes patient independence and confidence in managing their conditions. Studies show that patients who utilize self-monitoring and real-time communication tools experience improved quality of life and reduced feelings of isolation, as they feel more supported and engaged in their healthcare journey (Wang et al., 2021). Additionally, the platform's role in promoting cost-effectiveness is significant, as remote monitoring and telemedicine reduce the need for in-person consultations, thereby lowering healthcare expenditures. This combination of accessibility, patient empowerment, and reduced costs makes the "Internet Plus" platform an invaluable tool for the long-term management of chronic diseases (Stellefson et al., 2013).

3 Key Challenges in Chronic Disease Management

3.1 Common health issues among chronic disease patients

Chronic disease patients frequently experience complex health challenges that include both primary symptoms and additional comorbidities. These conditions often present with symptoms such as persistent pain, fatigue, and decreased physical mobility, which can interfere with daily activities and overall quality of life. For instance, patients with diabetes may also face cardiovascular complications, while those with chronic respiratory conditions might encounter limitations in physical endurance. Managing these diverse health issues requires continuous monitoring and regular intervention, making it challenging to maintain stable health outcomes without a robust support system. Studies indicate that a lack of consistent, self-management resources and education further increases the risk of adverse health events, such as hospitalizations and emergency care, especially for conditions requiring daily management (Yan et al., 2019).

In addition to physical symptoms, many chronic disease patients suffer from mental health conditions, such as anxiety and depression, due to the ongoing demands of their illness. These mental health issues often amplify the difficulty of maintaining treatment regimens and further impact patients' quality of life. Digital health tools, including online support communities, offer potential avenues for managing these mental health burdens by fostering a sense of community and shared experiences among patients. However, patient engagement with these resources remains a challenge, as not all users have the technological skills or interest to consistently utilize digital platforms (van der Eijk et al., 2013).

3.2 Factors influencing the effectiveness of chronic disease management

Several factors influence the effectiveness of chronic disease management, including patient engagement, accessibility to healthcare services, and the quality of communication between patients and providers. Patients' adherence to treatment and engagement with self-management practices are essential for positive health outcomes, yet adherence can be hindered by issues such as complex medication schedules, limited understanding of the condition, and challenges in accessing medical resources. Research suggests that adherence improves significantly when patients have regular follow-ups and personalized health interventions, which help to reinforce self-management behaviors (Liu et al., 2023).

Accessibility also plays a critical role, as patients in remote or underserved areas may lack adequate healthcare resources, limiting their ability to effectively manage their conditions. The use of digital platforms in chronic care can help address these disparities by providing remote monitoring and telemedicine services. However, these platforms must be user-friendly and adaptable to individual patient needs, as poor design or limited functionality can discourage sustained use. Furthermore, the success of chronic disease management depends heavily on the strength of patient-provider communication, which has been shown to improve when digital tools facilitate timely and clear interactions, thereby supporting better treatment adherence and health outcomes (Yang et al., 2020).

3.3 Impact on patients' mental health and quality of life

The ongoing management of chronic diseases has profound effects on patients' mental health and overall quality of life. Many patients experience psychological stress, including anxiety, depression, and feelings of social isolation, which can impact their ability to adhere to treatment and engage in self-care practices. These mental health challenges are often intertwined with the physical limitations imposed by chronic diseases, further diminishing quality of life. Studies indicate that integrating mental health support within chronic disease management platforms can alleviate some of these psychological burdens by providing patients with coping strategies and access to support networks (Kowitt et al., 2017).

Digital health platforms also contribute to improved quality of life by facilitating self-management and offering continuous support that helps reduce hospital visits and emergency care needs. Through consistent monitoring and engagement, these platforms empower patients to take control of their health, thereby boosting self-efficacy and reducing stress. However, the effectiveness of these platforms in enhancing quality of life is contingent upon their ability to foster meaningful patient interactions and trust. When patients feel supported and actively engaged, they are more likely to experience positive mental health outcomes and report a higher quality of life overall (Greene et al., 2020).

4 Role of the "Internet Plus" Continuous Care Platform

4.1 Enhancing patients' self-management abilities

The "Internet Plus" continuous care platform significantly enhances patients' self-management abilities, which is essential in chronic disease management. Self-management, involving daily decision-making and lifestyle adjustments, plays a critical role in long-term health outcomes for patients with chronic conditions. Through this platform, patients receive constant access to health education resources, real-time symptom monitoring, and self-management tools, allowing them to participate actively in their own care. For example, mobile applications and online dashboards allow patients to track vital metrics, such as blood pressure and glucose levels, and set medication reminders, which encourage adherence to treatment regimens. Studies have shown that internet-based self-management programs improve patients' understanding of their conditions and promote healthy behaviors, ultimately leading to reduced hospital admissions and emergency room visits (Lear et al., 2021).

In addition to physical health benefits, the platform also empowers patients psychologically, enhancing their self-efficacy by providing tailored guidance and feedback. Personalized reminders, motivational messages, and educational content help reinforce positive behaviors and build patients' confidence in managing their conditions independently. Research indicates that patients who actively engage in self-management platforms report increased satisfaction and confidence in managing their health, a critical factor in chronic disease control (Qiao and Li, 2022). By fostering self-management abilities, the "Internet Plus" platform equips patients to take a proactive approach to their health, which is linked to better long-term outcomes and a higher quality of life.

4.2 Supporting health monitoring for chronic disease patients

The "Internet Plus" platform plays a vital role in supporting continuous health monitoring for chronic disease patients, providing tools and resources for both patients and healthcare providers to maintain regular oversight of health status. Continuous monitoring is essential in chronic disease management, as it allows for early detection of complications and timely intervention, reducing the risk of severe health events. Wearable devices and connected mobile applications on this platform enable patients to track key health metrics, such as blood pressure, heart rate, and physical activity levels. These data are automatically shared with healthcare providers, allowing them to

analyze trends, adjust treatments, and offer guidance remotely. Studies on internet-based health management systems have demonstrated that these tools significantly improve patient outcomes by promoting adherence to treatment and identifying issues before they escalate (Han et al., 2022).

Additionally, the platform's real-time feedback mechanisms create a more proactive healthcare environment, where patients can respond immediately to changes in their health data. By involving patients in monitoring their own metrics, the platform not only increases patients' engagement in their health but also enables healthcare providers to deliver timely care without requiring physical visits. This continuous monitoring approach has been shown to reduce emergency department visits and improve overall treatment effectiveness in chronic disease management. For example, studies indicate that patients using health monitoring platforms experience fewer health complications, demonstrating the platform's value in maintaining health stability and improving clinical outcomes (Figure 1) (Yang et al., 2020; Liu et al., 2023).

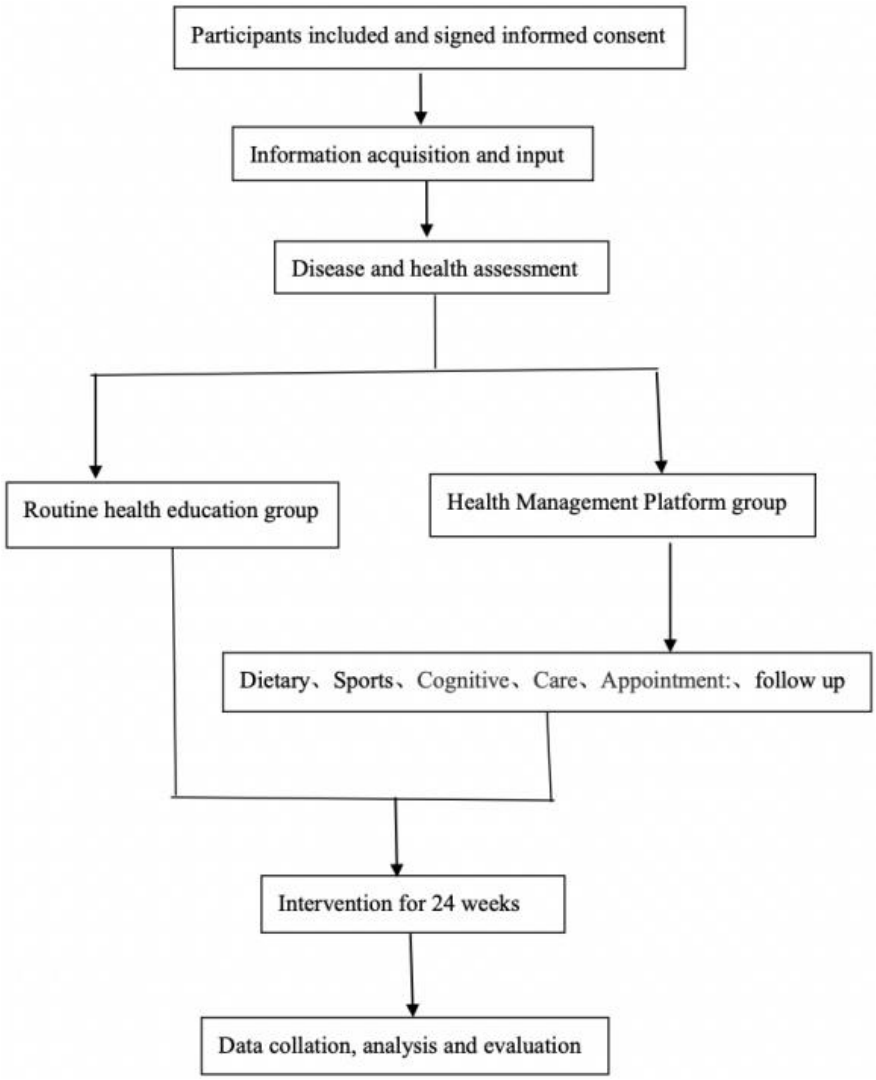

Figure 1 Illustrates the technical roadmap of the 'Internet Plus Medical' health management service model (Adopted from Yang et al., 2020)

4.3 Improving patient quality of life and satisfaction

Improving quality of life and patient satisfaction is a core objective of the 'Internet Plus' continuous care platform, particularly for individuals managing chronic conditions that significantly impact daily living. By offering continuous support, accessible healthcare resources, and self-management tools, the platform alleviates some of the physical, emotional, and logistical challenges faced by chronic disease patients. For instance, the platform's flexibility allows patients to engage with healthcare providers remotely, reducing the need for frequent in-person

visits and associated travel, which can be challenging for those with mobility issues. This ease of access and convenience are directly linked to enhanced patient satisfaction, as patients are better able to manage their condition without disrupting their daily lives (Liu et al., 2023).

Furthermore, the platform provides comprehensive educational content and mental health resources, which help patients cope with the emotional toll of chronic disease management. Studies indicate that patients utilizing digital health platforms report not only better physical health outcomes but also improved mental well-being, as they feel more supported and empowered in their health journey. Satisfaction with healthcare services also increases, as patients can maintain more consistent communication with healthcare providers, receive timely feedback on their health progress, and access resources tailored to their individual needs (Liu et al., 2023). By enhancing the quality of life and increasing satisfaction, the "Internet Plus" platform not only improves clinical outcomes but also fosters a more positive healthcare experience for chronic disease patients.

5 Impact of the 'Internet Plus' Continuous Care Platform on Mental Health

5.1 Alleviating psychological stress and feelings of loneliness

The "Internet Plus" continuous care platform offers significant mental health benefits for chronic disease patients by addressing psychological stress and alleviating feelings of loneliness. Chronic disease management can be a source of prolonged mental strain due to the physical limitations, lifestyle changes, and social isolation associated with long-term illness. The "Internet Plus" platform reduces these burdens by facilitating ongoing support through digital tools and resources. Patients have continuous access to online consultations, health information, and digital communication channels, enabling them to receive timely medical guidance and emotional reassurance. Studies have shown that platforms providing regular communication with healthcare providers reduce stress and anxiety levels, as patients feel more supported and less isolated in their health journey. The ability to contact healthcare providers virtually when needed can help reduce the anxiety that arises from uncertain health events or symptom flare-ups (Sherifali et al., 2018).

In addition to professional support, the platform's social features, such as online support groups and peer-to-peer communication options, enable patients to connect with others facing similar health challenges. This network of peers provides an environment for sharing experiences, advice, and emotional support, helping to alleviate loneliness. Research highlights that these digital communities provide a sense of belonging and reduce the social isolation often felt by patients with chronic illnesses, as they can communicate openly without fear of stigma or misunderstanding (Rod, 2016). Furthermore, the platform's resources, including educational articles, mental health exercises, and self-care tips, empower patients to manage stress actively. This access to tailored psychological resources enhances patients' mental resilience and promotes self-reliance in managing both physical and mental health needs. Through these multifaceted forms of support, the "Internet Plus" platform plays a critical role in reducing psychological stress and combating loneliness among chronic disease patients.

5.2 Promoting positive mental health behaviors

The "Internet Plus" continuous care platform promotes positive mental health behaviors by incorporating tools and resources that encourage proactive engagement in mental health care and self-care routines. Chronic disease management often requires patients to develop coping mechanisms for dealing with both the physical and emotional challenges of their condition. The platform's design includes various features that support the adoption of mental health-promoting habits, such as reminders for self-care practices, mental health education, and access to cognitive-behavioral therapy (CBT) resources. These tools encourage patients to engage in regular mental health maintenance activities, including relaxation techniques, mindfulness, and stress management practices, which are essential for managing chronic disease-related anxiety and depression. Studies show that chronic care platforms that include mental health resources are effective in motivating patients to adopt healthier coping strategies, which can lead to improved mental health outcomes over time (van Beugen et al., 2014).

Additionally, the platform's interactive elements, such as goal-setting features and progress tracking, further support patients in creating and sustaining positive behavioral changes. For example, the platform may provide personalized encouragement messages or tips for managing daily stress, reinforcing patients' commitment to

maintaining mental well-being. These behavioral interventions, which include strategies from CBT, foster greater self-awareness and help patients identify negative thought patterns or behaviors that may hinder their mental health. The availability of mental health education on topics like stress response, cognitive restructuring, and resilience-building techniques equips patients with the knowledge to better manage their mental health independently. Research indicates that platforms supporting behavioral self-regulation and providing mental health resources effectively reduce symptoms of depression and anxiety in patients with chronic diseases, promoting both physical and mental resilience (Stellefson et al., 2013). By fostering a proactive approach to mental health care, the "Internet Plus" platform plays a crucial role in establishing positive mental health behaviors that benefit long-term patient outcomes (Zhang, 2024).

5.3 Enhancing patients' psychological adaptation

The "Internet Plus" platform enhances patients' psychological adaptation to chronic illness by strengthening their sense of control and self-efficacy, which are vital components of resilience in the face of long-term health challenges. Psychological adaptation in chronic disease management refers to the ability of patients to adjust emotionally and mentally to the ongoing demands of their condition. This platform supports adaptation through tools that allow patients to track health metrics, access educational resources, and engage in continuous self-management, empowering them to actively participate in their care. By providing patients with real-time feedback on their health status and enabling frequent interactions with healthcare providers, the platform cultivates a sense of autonomy and control, which can mitigate feelings of helplessness often associated with chronic illness (Figure 2) (Opipari-Arrigan et al., 2020).

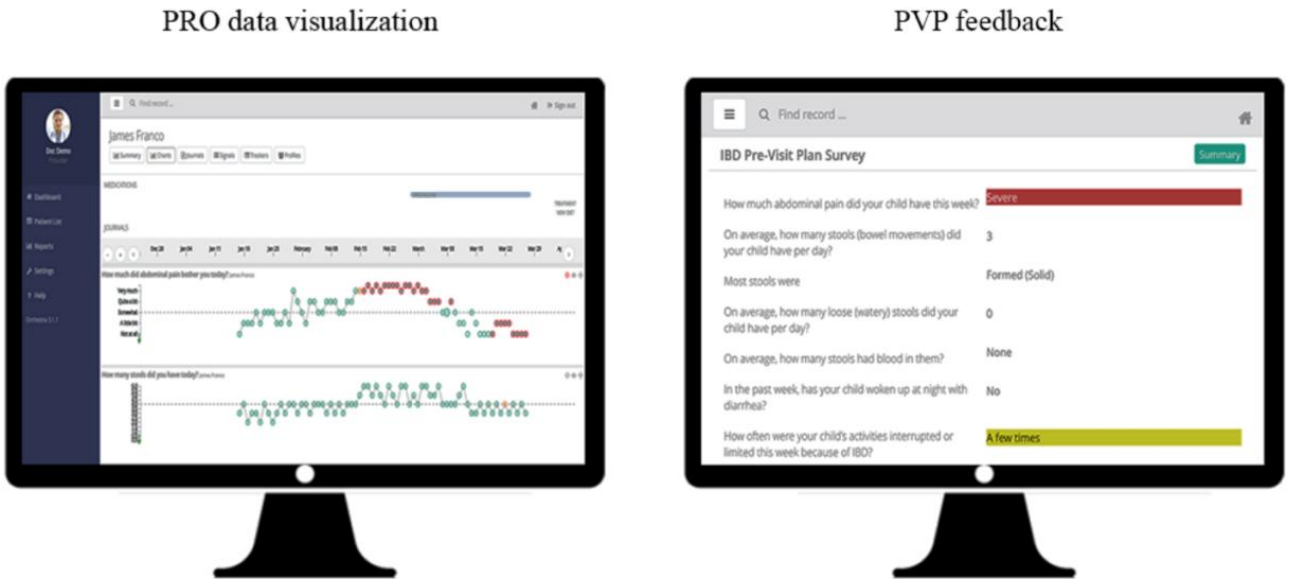

Figure 2 'Orchestra' clinician dashboard example screens (Adopted from Opipari-Arrigan et al., 2020)

In addition, the educational content on the platform, covering topics such as stress management, healthy lifestyle habits, and adaptive coping strategies, is tailored to reinforce patients' psychological resilience. Patients can gain confidence in their ability to manage health fluctuations, adhere to treatment protocols, and make informed decisions about their care. Research suggests that patients with a strong sense of self-efficacy and access to adaptive coping resources report better psychological health outcomes and greater satisfaction with their quality of life. The platform also facilitates psychological adaptation by connecting patients to mental health professionals who can provide additional support during times of high stress or health setbacks. This access to professional guidance enables patients to navigate emotional challenges more effectively, enhancing their ability to cope and adapt over the long term. By promoting psychological adaptation, the "Internet Plus" platform not only improves patients' mental well-being but also contributes to more stable health outcomes by fostering a resilient, proactive approach to chronic disease management (Li and Jiang, 2021).

6 Factors Influencing the Platform's Long-Term Effectiveness

6.1 Platform usage frequency and duration

The long-term effectiveness of the "Internet Plus" continuous care platform is significantly influenced by the frequency and duration of platform usage. Consistent use of the platform allows patients to maintain regular communication with healthcare providers, ensuring continuous support and timely adjustments to their care plans. Regular engagement helps reinforce patients' self-management behaviors and adherence to prescribed treatments, which are essential for effective chronic disease management. Research indicates that platforms with frequent interaction features, such as reminders and regular health assessments, are more likely to keep patients engaged over the long term. For instance, a study analyzing online healthcare platforms showed that patients who consistently used the platform over time experienced improved satisfaction and health outcomes (Yang et al., 2019).

However, challenges such as user fatigue or low engagement rates can impact the effectiveness of digital health solutions. For example, some patients may initially show high engagement but gradually decrease usage over time, which can diminish the platform's overall impact. Studies have highlighted the importance of "push" factors, such as automatic reminders or motivational messages, in sustaining long-term usage, as these encourage patients to remain proactive in their health management (Nijland et al., 2011; Baglivo et al., 2023). In sum, optimizing platform features to sustain frequent usage and monitoring user engagement levels are essential for maximizing the long-term benefits of the "Internet Plus" platform.

6.2 Platform design features and user experience

The design features and overall user experience of the "Internet Plus" platform play a crucial role in its long-term effectiveness, as usability and functionality directly impact patient satisfaction and engagement. A user-friendly interface with intuitive navigation, responsive design, and clear instructions encourages regular use by reducing the effort needed for patients to interact with the platform. Studies on digital health platforms emphasize that features such as easy-to-use monitoring tools, accessible educational content, and prompt feedback are highly valued by patients, as they simplify health management tasks and foster a positive experience (Wang et al., 2018).

Moreover, incorporating interactive features, such as real-time messaging with healthcare providers and customizable health dashboards, can enhance patient engagement by making the platform feel more personalized. Research indicates that when patients perceive the platform as responsive to their individual needs, they are more likely to use it consistently and benefit from the support it provides (Whitehead and Seaton, 2016). Additionally, the integration of data visualization tools, like graphs or charts showing progress over time, can motivate patients by allowing them to track their health improvements visually. Therefore, optimizing design features to meet user preferences and ensuring an enjoyable user experience are key factors in achieving long-term engagement and effectiveness of the platform.

6.3 Impact of social and cultural context

The social and cultural context of users also significantly influences the long-term effectiveness of the "Internet Plus" platform. Factors such as technological literacy, cultural attitudes towards digital health solutions, and social support structures can impact how effectively patients engage with the platform. In some regions, limited access to reliable internet or low digital literacy can hinder the adoption and sustained use of digital health platforms. Studies have found that patients in areas with strong digital infrastructure and higher acceptance of telehealth are more likely to experience positive outcomes from continuous care platforms (Liu et al., 2023).

Moreover, cultural norms related to healthcare, such as preferences for in-person consultations or trust in traditional medical practices, can also affect patients' willingness to engage with internet-based platforms. Platforms designed to account for these factors—for instance, by offering multilingual support or culturally relevant health education-tend to perform better in diverse populations. Additionally, family and community support can further enhance the effectiveness of these platforms by providing patients with additional motivation and assistance in using the technology. Therefore, adapting the platform to fit within the social and cultural context of its target users is critical for achieving sustained engagement and maximizing its impact.

7 Case Study: Application of the "Internet Plus" Continuous Care Platform in Chronic Disease Management

7.1 Research methodology and sample selection

The case study utilized a pre-post intervention design to evaluate the application of the "Internet Plus" continuous care platform in managing chronic diseases. Participants were selected based on criteria including a diagnosis of a chronic illness (e.g., diabetes, heart disease) and regular internet access. The study involved recruiting 230 patients from various primary care clinics, with eligibility based on age, internet accessibility, and fluency in the language of the platform. This selection process ensured a diverse patient base with varying levels of digital literacy, capturing a broad range of engagement and adherence behaviors (Figure 3) (Lear et al., 2021).

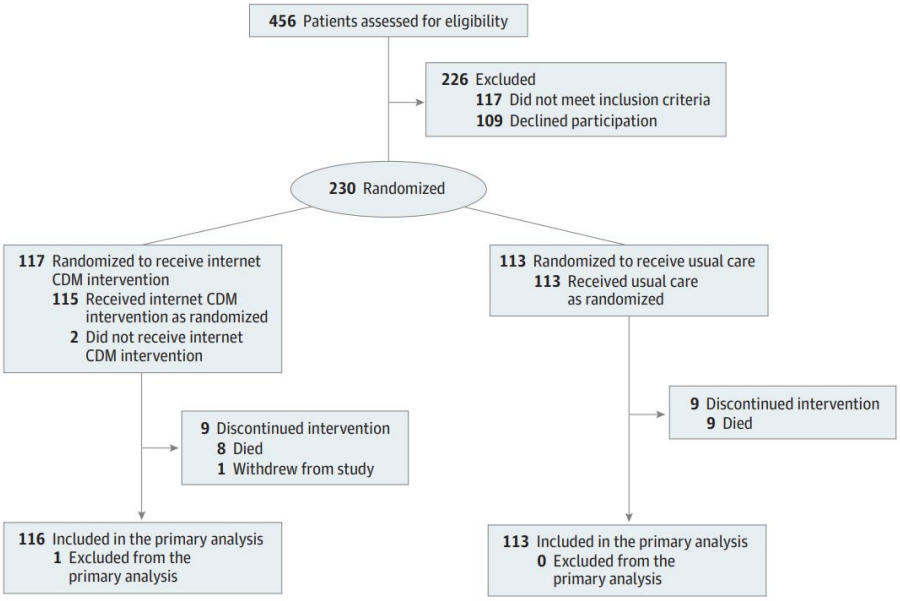

Figure 3 Consort diagram (Adopted from Lear et al., 2021)

The study's design also incorporated control measures to address variables that might influence the platform's effectiveness, such as socioeconomic factors and previous experience with digital health tools. Data was collected through electronic health records, patient self-reports, and platform usage metrics. The methodology aimed to assess both the feasibility of continuous platform use and its impact on clinical outcomes, self-efficacy, and patient satisfaction. A combination of quantitative and qualitative metrics was employed to ensure a comprehensive evaluation of the platform's effects over the study period (Opipari-Arrigan et al., 2020).

7.2 Primary interventions of platform application

The "Internet Plus" platform provided several primary interventions aimed at supporting patient self-management and enhancing communication with healthcare providers. Key features included real-time symptom monitoring, educational modules tailored to specific chronic diseases, and telemedicine options for regular consultations. These interventions were designed to promote active patient involvement in health management and improve adherence to treatment regimens. For instance, wearable devices and mobile apps were integrated to enable tracking of vital health metrics, such as blood pressure and glucose levels, which could be accessed by both patients and healthcare providers (Liu et al., 2023).

The platform also included a digital self-management program that offered reminders for medication adherence, lifestyle recommendations, and mental health support. Interactive educational resources were made available to help patients understand their condition and make informed health decisions. In addition, teleconsultation features allowed for virtual check-ins, enabling healthcare providers to monitor patient progress and provide timely adjustments to treatment plans. These interventions collectively created a structured support system, fostering continuous engagement and encouraging a proactive approach to managing chronic illness (Sherifali et al., 2018).

7.3 Health and psychological outcomes following platform use

Following six months of platform usage, patients reported significant improvements in both health and psychological outcomes. Quantitatively, there was a marked reduction in emergency room visits and hospital readmissions, attributed to the preventive support provided by the platform's monitoring and telehealth capabilities. Patients using the platform demonstrated better management of symptoms, such as stable blood pressure levels and lower glycemic variability, leading to an overall enhancement in physical health. The platform also fostered a sense of empowerment and self-efficacy, as patients gained confidence in managing their conditions independently (Nijland et al., 2011).

Psychologically, patients reported lower levels of anxiety and improved quality of life. The platform's community features, including peer support groups and access to mental health resources, played a significant role in reducing feelings of isolation and stress associated with chronic disease management (Deng et al., 2023). This social support, combined with regular interactions with healthcare providers, contributed to enhanced emotional well-being. Overall, these outcomes underscore the platform's potential in improving both health metrics and mental health among chronic disease patients by offering a comprehensive, accessible, and user-friendly approach to ongoing care (Wang et al., 2018).

8 Recommendations for Improving the "Internet Plus" Continuous Care Platform

8.1 Enhancing platform accessibility and usability

Improving accessibility and usability is essential to broaden the "Internet Plus" platform's reach, especially among elderly patients and those with limited digital literacy. Usability factors include intuitive navigation, clear visual elements, and user-friendly design to simplify the interaction for patients with varying technological proficiencies. Implementing universal design principles can make the platform more accessible for individuals with disabilities, ensuring that it complies with accessibility standards like WCAG 2.0, which provide guidelines for color contrast, text size, and screen reader compatibility (Mohamad et al., 2018).

Additionally, increasing accessibility for non-native speakers or those with low health literacy could involve multilingual support and simplified content that aligns with patients understanding levels. By integrating personalization options that allow patients to adjust settings according to their preferences, the platform can cater to diverse needs. Studies suggest that such accessible design features promote patient engagement and retention, as users feel more confident in managing their health through an inclusive and responsive interface (Dias et al., 2013).

8.2 Providing professional training for care providers

Training healthcare providers in digital tools and patient engagement techniques is crucial for maximizing the platform's effectiveness. Healthcare professionals need to be adept in using the platform's features to guide patients effectively and manage digital interactions. Training programs should include modules on digital communication, telemedicine protocols, and technical troubleshooting, ensuring that providers can support patients in a seamless and reassuring manner. A study on telehealth integration highlighted that well-trained providers positively impact patient satisfaction and health outcomes due to their confidence in using digital platforms (Anderson et al., 2014).

Healthcare providers also benefit from training on patient engagement, where they learn strategies to encourage consistent platform use, improve patient adherence to digital care plans, and provide emotional support through virtual communication. Continuous professional development that adapts to emerging digital tools and updates in platform features could further enhance care quality. This approach not only improves patient outcomes but also fosters a stronger patient-provider relationship, which is essential for the success of remote healthcare platforms.

8.3 Policy support and funding recommendations

Policy and funding support are vital for sustaining and expanding the "Internet Plus" continuous care platform. Governments and healthcare organizations could implement policies that subsidize the platform for

underprivileged patients, enhancing accessibility for low-income populations. Policy support can also promote collaborations between public health authorities and private healthcare providers, creating a more integrated healthcare system that leverages the platform's capabilities for widespread, effective care (Wang et al., 2016).

Funding allocations can support ongoing research to refine platform functionalities, such as predictive analytics for early intervention and integration with other healthcare databases for seamless patient data sharing. Government grants or subsidies can encourage continuous improvement, making the platform more robust and adaptable. Additionally, funding for outreach programs to educate communities on digital health benefits would increase platform adoption rates, thereby maximizing its impact on chronic disease management. Establishing these recommendations creates a sustainable environment that supports the platform's long-term efficacy, ensuring it remains an effective tool in chronic disease care.

9 Concluding Remarks

This study evaluated the long-term effects of the 'Internet Plus' continuous care platform on chronic disease management, demonstrating its effectiveness in improving both physical and psychological outcomes among chronic disease patients. The platform significantly enhanced self-management capabilities, enabling patients to monitor symptoms, adhere to treatment protocols, and reduce emergency room visits and hospital readmissions. Research also indicated positive outcomes on mental health, with reductions in stress and improvements in quality of life due to the availability of supportive resources and patient-provider interactions. Additionally, the platform's structure supports continuous care through real-time data monitoring and accessible telemedicine services, fostering a proactive approach to health management.

The findings suggest several practical applications for the 'Internet Plus' continuous care platform in healthcare systems. First, the platform's role in supporting self-management behaviors highlights the potential to reduce the burden on healthcare facilities by allowing patients to monitor and manage their health independently. For healthcare providers, this digital tool offers an efficient way to maintain patient engagement and provide timely interventions without the constraints of in-person consultations. Policymakers could consider integrating this platform into chronic care strategies to improve accessibility, especially in rural areas. The platform also promotes a holistic approach to chronic disease management by including mental health resources, which could be expanded to address specific psychological needs, thus enhancing overall patient satisfaction and quality of life.

Future research should focus on exploring the long-term sustainability of the platform's positive effects and investigating factors that influence patient engagement and adherence over extended periods. Additionally, studies comparing the efficacy of the 'Internet Plus' platform in diverse patient populations, including older adults and those with limited technological access, would provide insights into how to adapt the platform for broader applicability. There is also an opportunity to explore how integrating advanced technologies, such as artificial intelligence and machine learning, could enhance predictive analytics and provide personalized recommendations based on patient health data. Expanding on the mental health components within the platform could further benefit patients with chronic diseases by offering comprehensive support that encompasses both physical and psychological care.

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Conflict of Interest Disclosure

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