

Enhancing Hospital Collaboration Through ICT: A Case Study of Utilizing a Chat App in a Podiatry Clinic

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Abstract

In podiatric care, achieving genuine collaboration among all stakeholders is imperative, but practical challenges hinder this in both specialized and non-specialized healthcare settings. In addressing this issue, the clinic previously utilized paper-based communication tools akin to exchange journals, with limited efficacy. To overcome these limitations, the clinic embraced JOIN, an ICT app developed in Japan, facilitating collaboration among all healthcare professionals. This implementation enables the sharing of patient information and seamless communication, reporting, and consultation essential for treatment within the clinic setting.

The integration of JOIN has significantly improved collaboration among all practitioners associated with the podiatry clinic, including specialists, dialysis facilities, home care stations, and relevant personnel. This enhanced coordination has made advanced care planning achievable. Moving forward, there is a commitment to further the adoption of ICT to empower more healthcare providers in prioritizing patients' feelings and intentions during treatment. The case of fuji foot and cardiovascular clinic serves as a valuable model for advancing seamless collaboration in podiatric care through innovative technologies.

Keywords: Podiatric diseases; Telemedicine; Specialized podiatry clinic; Advanced care planning; COVID-19 pandemic; ICT

Description

The author, with extensive experience in vascular reconstruction and plastic surgery in specialized hospitals, established a specialized podiatric clinic to bridge the gap between everyday practice and specialized hospital care. Despite prior experience in specialized hospitals, the author recognized the current difficulties in providing comprehensive information, timing treatment procedures, considerations, lifestyle precautions, and re-referral timing to other healthcare providers. Additionally, the challenge of consulting from non-medical to medical settings and clinics to hospitals became apparent [1].

Initially focusing on curing illnesses and preserving patients' Quality of Life (QOL), the author's goal shifted to embracing a "Make a Wish" policy, with patient intentions deepened. To achieve this, the decision was made to introduce Information and Communication Technology (ICT). The aim is not just to care for patients referred by specialists but to formulate an interactive treatment approach aligned with patients' aspirations for the future [2].

Depth analysis of five case studies

Case 1: The JOIN app streamlined communication between a clinic and a specialized podiatric clinic for a severe lower limb ischemia patient undergoing dialysis, residing approximately 30 kilometres away. The timely coordination averted potential complications in the high-risk foot.

Case 2: Showcases the JOIN app's role in quick referral and decision-making for a post-digestive cancer surgery patient with black necrosis. The app enabled communication between a cardiac vascular surgeon and a specialized limb salvage hospital, addressing the patient's urgent needs.

Case 3: A diabetic patient receiving home-based care faced deteriorating foot conditions due to insufficient awareness in the dialysis unit. Amidst the challenges during the COVID-19 pandemic, the JOIN app facilitated collaboration among a visiting nursing station, local practitioner, specialized foot clinic, and home care, enabling focused and coordinated treatment.

Case 4: Involves a patient with foot necrosis due to chronic iron-deficiency anaemia, opting for palliative care. The JOIN app facilitated collaboration among a visiting nursing station, foot clinic, and various care professionals, enhancing the patient's quality of life in a challenging environment following the death of the spouse.

Case 5: Demonstrates the JOIN app's contribution to coordinating care for a patient with cellulitis and significant exudate in both lower legs. The app enabled communication between the patient, visiting nursing station, and involved professionals, fostering shared understanding of the patient's condition and treatment preferences.

Results

Case 1: The condition did not worsen, and the patient showed improvement.

Case 2: The patient avoided amputation and successfully underwent limb salvage.

Case 3: Two critical weeks bridged the patient's life until admission. The ulcer infection showed signs of healing during this period, and the patient's condition improved significantly. The patient was discharged in better condition than before the ulcer developed.

Case 4: The wound, referred to as the "end-of-life sore," epithelialized within six months.

Case 5: After a few days of outpatient treatment, edema reduced, exudate ceased, and within ten days, the ulcer completely healed, showcasing a remarkable improvement.

Benefits of implementation

While some regions have local healthcare collaboration systems, they often suffer from complexities such as cumbersome login procedures, device restrictions, and a lack of user-friendly features like chat functionalities to ensure safety. On the other hand, JOIN, as demonstrated in the case studies, seamlessly connects all stakeholders involved in patient care, including specialists, podiatric clinics, and home care stations, in real-time [3].

Furthermore, JOIN allows for a comprehensive understanding of the patient's life beyond the examination room, sharing not only the patient's living environment but also their evolving emotions and future aspirations [4]. This collective sharing fosters a sense of trust from patients towards healthcare providers, enhancing the overall patient-provider relationship.

Discussion

One recurring question from those hesitant about implementation pertains to concerns about the security of a system containing personal information. Many express reservations due to the inclusion of sensitive data in the JOIN system [5]. In response, it is important to note that JOIN has obtained approval as a medical device, with security measures equivalent to Electronic Medical Records (EMRs). Therefore, there is no need to worry about information leaks from vulnerabilities such as those found in Social Networking Sites (SNS).

The second most frequent question comes from specialized physicians worried about increased workload and being bogged down by the introduction of ICT. Contrary to this concern, the author emphasizes that the adoption of ICT actually reduces workload. This is because early collaboration through ICT significantly decreases the substantial workload effort individual physicians spend on severe patients who missed referral timings or on cases of mild severity that did not require consultation [6].

The third most common inquiry centres around the perceived complexity of the implementation process. To address this, the clinic provides a comprehensive guide covering safety explanations, the significance of using JOIN, step-by-step account creation procedures, links to relevant medical societies, information about JOIN's development company, Allm Inc. and materials created by the distributor, Kaneka Corporation. Additionally, support mechanisms are in place for any issues during app download and registration. As a unique initiative, the clinic creates a temporary chat group with all

clinic staff and interested facility member's post-registration, allowing practice sessions for using JOIN.

Conclusion

Moving forward, the goal is to widely disseminate the understanding that the adoption of ICT not only significantly reduces the workload of physicians but also assures the robust security of JOIN. In the role of a foot care medical educator, the aim is to convey the necessity of JOIN to learners in the field of foot care.

In the realms of home care foot and medical foot care, professionals encounter various unknown scenarios, leading to questions, concerns, and doubts. Knowing that there is a reliable external connection available at all times for such situations and being able to initiate smooth collaboration as needed when in the field, strengthens the connection between home care and medical institutions. This, in turn, builds confidence in professionals to consult without hesitation when needed, ensuring timely interventions.

Moreover, through ICT collaboration, there has been a significant recovery in the opportunity to grasp the emotional fluctuations related to patient treatment. Being able to share feelings within the team that patients may not express in front of the physician enables not only treatment but also the realization of patient aspirations. This has led to numerous experiences where both patients and healthcare providers can set goals for treatment, understanding the patient's desires and the purpose of treatment for future objectives.

As a certified institution for learning foot care, the aim is to promote the use of ICT and JOIN to ensure that individuals who have learned at the clinic can confidently and securely contribute to organizations and communities. The ongoing commitment is to facilitate patients in receiving treatment with confidence. There is no conflict of interest in these efforts.

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