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Service Design and Evaluation of OpenNotes for Craniofacial Deformity Management in Patients and their Caregivers

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Objectives: This study aimed to assess the feasibility of implementing OpenNotes in Korea. It involved developing and evaluating the Open-CHA service, which provides clinical summary information to patients diagnosed with craniofacial deformities and their caregivers following outpatient visits. **Methods:** The study included 109 patients diagnosed with craniofacial deformities, along with their caregivers. The Open-CHA service was developed by referencing OpenNotes and involved a user needs assessment, a pilot test, and an evaluation of its effectiveness. Data were analyzed using descriptive statistics and the paired *t*-test. **Results:** Short message service templates for the Open-CHA service based on a user needs assessment conducted with patients, caregivers, and healthcare professionals. These templates were refined and improved following a pilot test. After the implementation of the Open-CHA service, most participants evaluated OpenNotes positively. Additionally, there were observed increases in health knowledge and efficacy in patient-physician interactions. A statistically significant improvement in mobile health literacy was also confirmed. **Conclusions:** The implementation of the Open-CHA service significantly enhanced mobile health literacy among patients with craniofacial deformities and their caregivers, indicating positive outcomes for the potential adoption of OpenNotes in Korea. This suggests that introducing OpenNotes into the Korean healthcare system is appropriate.

Keywords: Digital Health, Documentation, Health Communication, Patient Safety, Physician-Patient Relations

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I. Introduction

With the advancement of information and communication technology, patients are increasingly becoming proactive healthcare consumers. They use various media to acquire the medical knowledge they desire, which leads to improved health outcomes and reduced healthcare costs [1]. In the United States, 2020 saw the introduction of mandatory electronic access to medical records to enhance patient engagement, which involved the extension of OpenNotes to all patients and marked the beginning of a new digital health era [2]. OpenNotes is a system that facilitates the online sharing of medical records between patients and physicians, allow-

ing patients to access their records at any time [3]. This accessibility has been shown to increase patients' control over their illnesses, enhance their memory and understanding of treatment plans, and assist in reviewing and understanding test results, adhering to medication, and maintaining medical appointments [3–6]. By reviewing their medical records, patients can help prevent errors in their care, thereby enhancing patient safety [4]. Additionally, patient participation has been linked to improved quality of care and the development of patient-centered healthcare services [7]. Moreover, the implementation of OpenNotes has proven beneficial for vulnerable groups, including the elderly, ethnic minorities, and individuals with lower educational levels, thereby contributing to the achievement of health equity [5].

In Korea, the National Health Insurance Service website provides access to medical information, and some tertiary hospitals also offer this information through their websites or apps [8]. However, the information available typically includes only appointment dates, test results, and prescription details, rather than comprehensive medical records like those found in OpenNotes [8]. A survey on the awareness and attitudes of the general public towards OpenNotes in Korea showed that 88.9% of participants were optimistic about its implementation and expressed a willingness to participate if it were introduced [9]. Additionally, a study by Choi et al. [10] found that 88.6% of hospital staff were unfamiliar with OpenNotes, yet 67.4% of participants responded positively to its potential implementation. This suggests that while there is a strong desire among patients and healthcare professionals to review medical records, the infrastructure necessary to support this need has not yet been fully implemented.

Therefore, this study aimed to evaluate the feasibility of implementing OpenNotes in Korea by providing a service that offers summaries of outpatient visits and evaluating its effectiveness. The participants include patients diagnosed with craniofacial deformities who require ongoing health management due to the necessity for long-term, repeated tests, treatments, and surgeries throughout their growth. The focus of this study is on the development and evaluation of the Open-CHA service, which provides detailed overviews of outpatient visits to patients with craniofacial deformities and their caregivers, supporting ongoing treatment and efficient health management.

II. Methods

1. Participants

This study focused on developing the Open-CHA service and evaluating its effectiveness through a single-group pre-/post-test design. Participants were either individuals aged 19 or older with craniofacial deformities or caregivers of patients under 19 who were proficient in using smartphones. The recruitment process involved 10 participants for the user needs assessment, 20 for the pilot test, and 88 for the evaluation of the Open-CHA service. The selection of 10 participants for the needs assessment was informed by a mobile app needs survey conducted by Lee and Kim [11]. The pilot test sample size was established by the research team based on the number of outpatient days per week and the average patient turnout at the plastic surgery outpatient clinic of CHA Bundang Medical Center. The sample size for the Open-CHA effectiveness evaluation was derived from a study by Digin et al. [12], which involved providing a short message service (SMS) appointment reminder service to cataract patients and indicated a need for 68 participants. To account for a potential 25% dropout rate, 88 participants were ultimately recruited [13]. The Institutional Review Board of Bundang CHA Medical Center approved the study (Approval No. CHAMC 2022-05-047-006). Recruitment occurred at the plastic surgery outpatient clinic of C Hospital from November 9, 2022, to April 9, 2023. The final analysis included 109 participants: 10 for the user needs assessment, 15 for the pilot test, and 84 for the evaluation of the Open-CHA service.

2. Procedure

The study procedure is shown in Figure 1.

Step 1 (User needs assessment): The decision was made to utilize the hospital's SMS text service to provide the Open-CHA service prior to conducting the User needs assessment. For this assessment, the research team collected feedback from patients at various stages of treatment for craniofacial deformities, focusing on the information they deemed necessary about their condition and treatment. Subsequently, a draft SMS template for the Open-CHA service was created to incorporate these insights. The User needs assessment included interviews with five plastic surgery healthcare professionals and five patients or caregivers of individuals with craniofacial deformities. Materials were prepared to explain the importance of the Open-CHA service to patients or caregivers, and scenarios were developed to illustrate how they might communicate with physicians using this service. The

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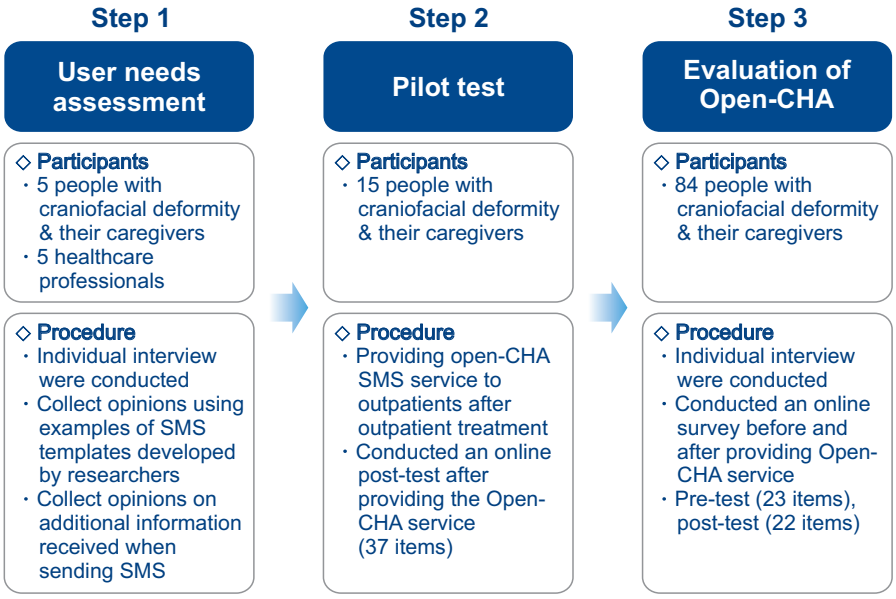

Figure 1. Study procedure for Open-CHA. Open-CHA means a short message service system developed in this study that sends patients an overview of their outpatient medical records.

assessment featured semi-structured questions in questionnaires, inquiries about potential additions to the SMS template, and questions regarding the information that patients or caregivers wanted to know. Healthcare professionals provided input on frequently asked questions, critical issues that patients often overlook, and considerations for vulnerable populations. Based on the feedback obtained in Step 1, revisions were made to the draft SMS templates for Open-CHA.

Step 2 (Pilot test): Using the modified SMS templates developed in Step 1, a pilot test was conducted with patients who visited the plastic surgery outpatient department over a 2-week period. After their appointments, patients were offered the Open-CHA SMS service, which was followed by a post-appointment online survey consisting of 36 items.

Step 3 (Evaluation of the Open-CHA service): To evaluate the effectiveness of the Open-CHA service, medical professionals prepared summaries of outpatient visits for patients with craniofacial deformities or their caregivers. These summaries, sent via SMS after the appointments, included details such as the status of test results (normal/abnormal), the scheduled date for the next surgery, and precautions outlined by the doctor before surgery. Additionally, to assess the impact of the Open-CHA service, pre-online surveys (23 items) and post-online surveys (22 items) were conducted. The efficacy of the Open-CHA service will be determined by examining several factors: patients' perceived efficacy in interactions with their physicians, patients' trust in their physicians, mobile health literacy, and awareness of OpenNotes before and after using the service.

3. Outcome Measures

The survey questionnaire employed in this study comprised 37 items, with the items for each stage shown in Table 1.

The "General Characteristics" section contained five items that gather information on sex, age, subject classification (whether the individual is a patient or caregiver), patient initials, and any additional information they wish to include in Open-CHA. The "Subjective Health Knowledge" section included eight modified items from the Consumer-centered Open Personal Health Record (CoPHR) [14].

The communication between patients and physicians was assessed using two different tools. To evaluate how effectively patients felt they could interact with their physicians, five items translated from the Perceived Efficacy in Patient-Physician Interactions (PEPPI) were utilized [15]. Additionally, patients' trust in their physicians was measured using five items from the Ambulatory Care Experiences Survey (ACES) [16]. Mobile health literacy was gauged with two items from the Mobile-centered Digital Health Readiness (mDiHERS) scale [17].

To assess awareness of OpenNotes, experience with medical records, requests for corrections, and perceptions of medical record reliability, we utilized 12 items from a tool developed by Choi et al. [9]. This tool measures the general public's experiences and attitudes toward medical records. Awareness of OpenNotes was evaluated using two closed-ended items and two multiple-choice items. Experience with medical records and their perceived reliability were measured on a 5-point Likert scale. The section on requests for correction of medical records included one multiple-choice item to identify reasons for reluctance in requesting correc-

Table 1. Composition of the questionnaires used in each step

Variable	Step 2 (37 items)	Step 3	
		Pre-test (23 items)	Post-test (22 items)
General characteristics (5 items)	○ (5 items)	○ (4 items)	○ (4 items)
Subjective health knowledge (8 items)	○	○	○
Communication between patients and physicians (10 items)	○	○ (5 items)	○ (5 items)
Mobile health literacy (2 items)	○	○	○ (3 items)
Awareness of OpenNotes (4 items)	○	○	○ (3 items)
Experience using medical records (2 items)	○	-	-
Request for correction of medical records (3 items)	○	-	-
Medical record reliability (3 items)	○	-	-

tions, and two items that measured the burden of making such requests and the willingness to request confirmation of medical records, also using a 5-point Likert scale.

4. Statistical Analyses

The data collected from the survey were analyzed using SPSS version 26.0 (IBM SPSS, Armonk, NY, USA), employing descriptive statistics and the paired *t*-test.

III. Results

1. Step 1: User Needs Assessment

For the user needs assessment, the research team collected feedback from patients at different stages of treatment for craniofacial deformities concerning their condition and the information they needed about treatment. Using this feedback, an initial SMS template for the Open-CHA service was created. Additionally, informational materials that explained the importance of the Open-CHA service were prepared and utilized during the user needs assessment with patients and caregivers (Figure 2).

The results from the user needs assessment interviews revealed that patients are looking for the Open-CHA service to offer information about hospital visit logistics, including testing locations and floor details, as well as insights into medical costs and the treatment process. This encompasses post-surgery care, necessary precautions, and specific treatment details (Table 2). Medical staff, on the other hand, suggested that the service should provide more detailed information, such as where to purchase items needed after surgery, financial assistance for vulnerable groups, interpretation services, and other critical issues that patients often overlook. They also recommended considering two-way communication options, as opposed to the currently planned one-way communication for the Open-CHA service.

2. Step 2: Pilot Test

Supplementary Table S1 presents the general characteristics of the participants and the results of the variables measured in the pilot test. The participants had an average age of 12.07 years. Their subjective health knowledge was recorded at 4.15 ± 0.55. Fourteen participants (93.3%) were unfamiliar with OpenNotes; however, all 15 participants viewed it favorably. The participants expressed a desire for the Open-CHA service to cover significant treatment progress, procedures and treatments, current health issues, appointment scheduling, and explanations of tests.

The perceived efficacy of patient-physician interactions was rated at 3.67 ± 0.55, while trust in physicians scored 4.41 ± 0.64. The burden associated with requesting medical records was 2.47 ± 1.19, primarily due to the belief that hospitals and doctors hold authority over medical records, as indicated by nine participants (60.0%). The reliability of medical records received a rating of 3.64 ± 0.27, and understanding of medical records was rated at 3.69 ± 0.63. The average mobile health literacy among participants was 5 out of 5. Mobile devices (12 participants, 80.0%) and computers (11 participants, 73.3%) were the most commonly used tools for health management and accessing health information.

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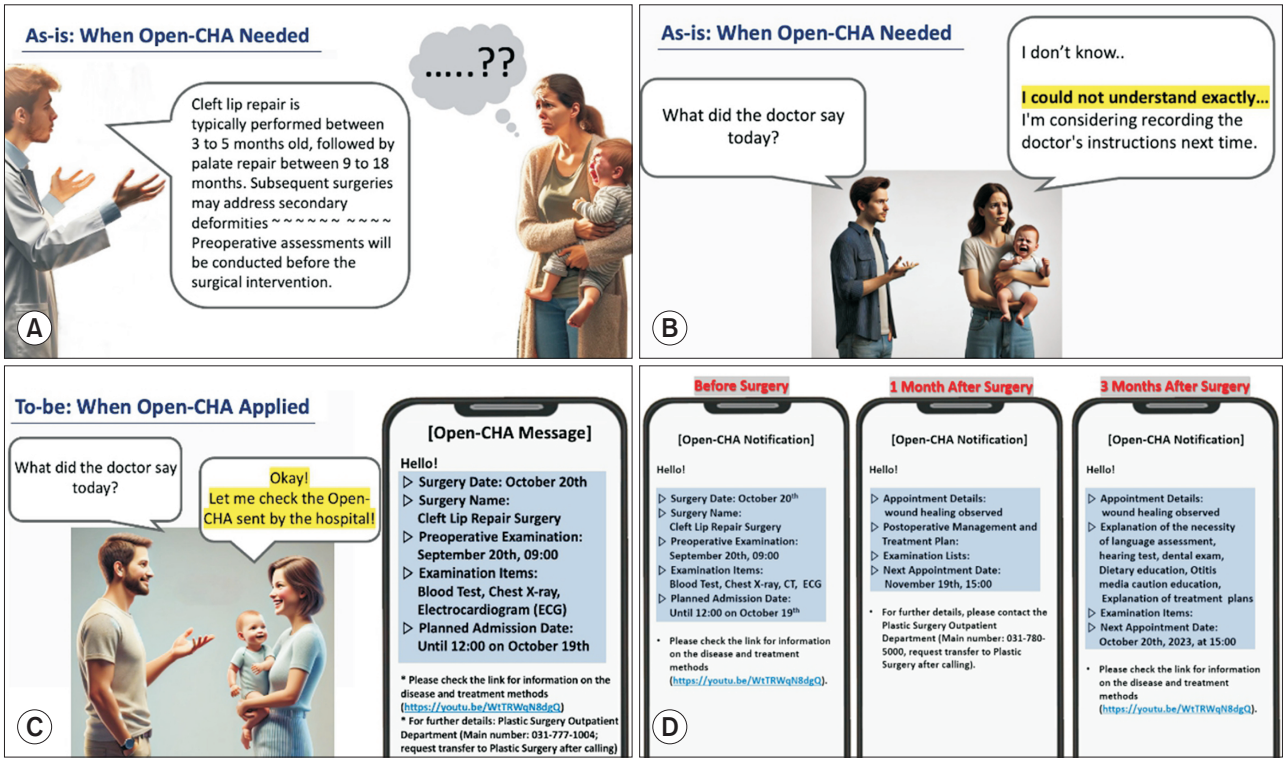

Figure 2. Guidelines for the user needs assessment and draft template for Open-CHA short message service. (A, B, C) Guidelines for participants. (D) Draft template for Open-CHA short message service. Open-CHA means a short message service system developed in this study that sends patients an overview of their outpatient medical records.

3. Step 3: Evaluation of the Open-CHA Service

Table 3 displays the general characteristics of the participants who evaluated the Open-CHA service. The primary method for obtaining health information among the study participants was through a mobile device, used by 63 participants (75.0%). A substantial majority, 77 participants (91.7%), were previously unaware of OpenNotes. Nevertheless, all but one participant gave positive feedback on the Open-CHA service after completing the survey. The main factors contributing to the favorable assessments of OpenNotes, as identified in both the pre- and post-evaluations, included enhanced comprehension of the doctor's instructions and the convenience of accessing medical records at any time (Table 4). On the other hand, the negative feedback regarding OpenNotes primarily stemmed from concerns about potentially increasing doctors' workload and the fear that doctors might not document their opinions candidly if patients had access to their notes (Table 4). Mobile health literacy showed a significant improvement from the pre-survey to the post-survey ($t = -2.55$, $p = 0.012$). While there was a trend toward increased subjective health knowledge and perceived efficacy in patient-physician interactions from the pre-survey to the post-survey, these improvements were not statistically significant.

IV. Discussion

This study evaluated the feasibility and effectiveness of implementing OpenNotes for domestic patients by delivering summaries of outpatient medical records via SMS through the Open-CHA service, specifically targeting those with craniofacial deformities. To tailor the service to user needs, a needs assessment was conducted involving patients, caregivers, and medical professionals, which informed the creation of the SMS template for the Open-CHA service. Additionally, a pilot test was carried out with outpatient visitors to refine this SMS template. Following the implementation of the Open-CHA service, the majority of participants responded positively to OpenNotes. There was an observed increase in patients' subjective health knowledge and perceived effectiveness of their interactions with physicians. Furthermore, a statistically significant improvement in mobile health literacy was documented.

We initially conducted a user needs assessment to develop the SMS template for the Open-CHA service. This assessment involved both patients and their caregivers, reflecting the significant number of pediatric patients in this disease group [18]. Given the rarity of the condition, we also included medical professionals who have extensive experience

Table 2. Interview results for user needs assessment

Category	Item	Interview results
Medical staff	Additional content they want to add to the SMS draft	Medical content: postoperative progress check (wound healing satisfactory, good progress, slow wound healing, caution required, continuous ointment application recommended) Postoperative care and subsequent treatment plan
	Frequently asked questions by patients	Preoperative examinations and precautions Postoperative plans such as management of scars Purchase locations for necessary items after surgery (wrist support, bandages, etc.)
	Important guidelines frequently neglected by patients	Wearing arm splint brace in child patient with cleft lip/palate Wearing a nasal retainer after cleft palate/secondary surgery in children Restriction on external stimuli such as blowing or sucking post-surgery
	Considerations for vulnerable populations (foreigners, etc.)	Economic support, language assistance (utilization of in-hospital support available)
	Other concerns	The importance of establishing communication methods through unidirectional communication channels (similar to Naver form—name, date of birth, reservation, questions)
Patients and their caregivers	Information desired to be included in SMS service	Location of preoperative examinations (floor), guidance on preoperative preparation items, name of physician Postoperative management of scars and wounds, post-treatment cautionary measures, detailed medical instructions Medical expenses

SMS: short message service.

in treating these patients [19]. This strategy enabled us to identify more practical and specific needs beyond those of individual patient experiences.

The Open-CHA service is designed to provide patients with comprehensive medical information about their treatment process, akin to OpenNotes. It aims to surpass the limitations of information currently available through the web, apps, and SMS services operated by the National Health Insurance Service and some hospitals [8]. At present, the information accessible via apps or the web is restricted to appointment confirmations, test results, and prescription details, which does not sufficiently help patients understand the full scope of their treatment process [8]. To remedy this, the Open-CHA service was created to share medical opinions, future management plans, and test information with patients undergoing outpatient treatment. This approach mirrors the OpenNotes system, where medical records are openly shared between healthcare providers and patients. Initially, doctors had to spend extra time summarizing their consultations to provide the Open-CHA service to patients. However, this time could be conserved if the service were to evolve into a format similar to OpenNotes, where medical records are directly shared with patients without the need for additional documentation. Although some reports indicate that the implementation of OpenNotes led to increased documentation time [20], the overall negative impact on workload was less significant than anticipated [21]. Moreover, allowing patients direct access to their medical records through a system like OpenNotes, without requiring separate procedures, could significantly streamline the process [20,22]. Patients who have unrestricted access to their medical records are better able to remember their treatment plans, manage their medications more effectively, and potentially reduce medical costs [23]. Furthermore, improved access to medical data empowers patients, decreases the number of consultations, leads to more efficient healthcare delivery, and ultimately results in better health outcomes [22].

The pilot test results revealed that although most participants were unfamiliar with OpenNotes, they unanimously viewed it as a beneficial initiative, corroborating the findings of Walker et al. [5] and DesRoches et al. [24]. Additionally, 80% of participants (12 out of 15) reported that they primarily use mobile devices for managing their health or accessing health information, aligning with the preliminary

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Table 3. General characteristics of participants in the Open-CHA service evaluation

Characteristic	Value
Participants	
Patient	22 (26.2)
Caregiver	62 (73.8)
Sex	
Male	45 (53.6)
Female	39 (46.4)
Age (yr)	13.96 ± 13.91 (0–86)
0–10	39 (46.4)
11–20	30 (35.7)
21–30	11 (13.1)
≥31	6 (4.8)
Means for health management and acquiring health information (multiple responses)	
Mobile device	63 (75.0)
Computer	38 (45.2)
Family/acquaintances	5 (6.0)
Healthcare professionals	4 (4.8)
TV	3 (3.6)
Communication between patients and physician	
Trust in physician	4.49 ± 0.52
Awareness of OpenNotes	
Participants who know OpenNotes	
Yes	7 (8.3)
No	77 (91.7)

Values are presented as number (%) mean ± standard deviation (min–max).
Open-CHA means a short message service developed in this study that sends patients an overview of outpatient medical records.

assessments of the Open-CHA service. This supports the decision to deliver the Open-CHA service via smartphone SMS. It is noteworthy that 43% of adults who did not review OpenNotes in previous studies had simply forgotten about its availability [4]. Therefore, facilitating access to it through SMS could improve efficiency by reducing the inconvenience associated with locating and accessing the service. The mobile health literacy of the group, measured on a 5-point scale, confirmed their suitability for future engagement with and utilization of the Open-CHA service, including OpenNotes. Moreover, while trust in physicians was relatively high, scoring 4.11 out of 5, participants' understanding of medical records was somewhat lower, at 3.69 out of 5. This discrepancy suggests a potential link to the less effective patient-physician interactions observed, highlighting the need for improved communication to enhance patients' understanding of their medical records. In this regard, the implementation of the Open-CHA service appears appropriate.

The most common reason for positively evaluating OpenNotes was the desire to freely access one's medical records and achieve a better understanding of the doctor's instructions. These opinions remained consistent before and after the introduction of the Open-CHA service. Lam et al. [4] also confirmed the importance of using OpenNotes for understanding physicians' opinions and treatment plans. Walker et al. [5] noted that OpenNotes empowered individuals to manage their health and feel a sense of control. Negative evaluations of OpenNotes included concerns that doctors might not record their opinions honestly given the possibility that patients would view the notes, a sentiment also reported by Choi et al. [10]. However, previous research indicated that 89% of healthcare providers wanted patients to be aware of errors found in medical records [4], and minimal efforts had been made to simplify medical records for patients [6,25]. Additionally, Choi et al. [10] echoed concerns that OpenNotes might increase physicians' workload. Dur-

Table 4. Comparison of scores for variables in the pre- and post-test

Variable	Pre-test (n = 84)	Post-test (n = 52)	t (p-value)[a]
The information they want to be included in Open-CHA service (multiple responses)			
Main progress status	63 (75.9)	40 (74.1)	
Surgical procedure	53 (63.9)	27 (50.0)	
Present main health problem	33 (39.8)	20 (37.0)	
Reservation	31 (37.3)	15 (27.8)	
Examinations	28 (33.7)	11 (20.4)	
Others	8 (9.6)	3 (5.6)	
Subjective health knowledge	4.11 ± 0.54	4.04 ± 0.61	0.66 (0.508)
Communication between patients and physician			
Perceived efficacy in patient-physician interaction	3.80 ± 0.73	3.90 ± 0.65	–0.83 (0.408)
Mobile health literacy	4.40 ± 0.91	4.71 ± 0.53	–2.55 (0.012)
Awareness of OpenNotes			
OpenNotes is evaluated as a good method			
Yes	84 (100)	51 (98.1)	
No	0 (0)	1 (1.9)	
Reasons for evaluating OpenNotes positively			
Increasing comprehension of physician instructions	59 (70.2)	43 (82.7)	
Accessibility to medical records at any time	59 (70.2)	31 (59.6)	
Viewing access to medical records as a fundamental right	29 (34.5)	24 (46.2)	
Enhancing comprehension of prescription details	16 (19.0)	21 (41.2)	
Possibility of medical error by physicians	7 (8.3)	10 (19.2)	
Reasons for evaluating OpenNotes negatively			
The possibility of increased workload for physicians	22 (26.2)	25 (48.1)	
The possibility that physicians may not document honestly if patients access their records	6 (7.1)	9 (17.3)	
Increased patient confusion	6 (7.1)	2 (3.8)	
Incomprehensibility of medical records	4 (4.8)	6 (11.5)	
Not helpful for health management	1 (1.2)	4 (7.7)	

Values are presented as number (%) mean ± standard deviation.

Open-CHA means a short message service developed in this study that sends patients an overview of outpatient medical records.

[a]Paired t-test p-value.

ing the implementation of OpenNotes in the United States, there were concerns about increased workload for physicians [6]. However, the results of a pilot project confirmed that OpenNotes served a valuable tool for both patients and physicians, leading to its adoption [24]. This finding aligns with similar results reported from Sweden and other countries in Europe. In line with recent advancements in the rights and awareness of healthcare consumers in Korea, the Korean government announced in 2017 that patient-centered care would be the goal of the Korean healthcare system [26]. Ensuring patients' access to information is fundamental to delivering patient-centered healthcare [26]. All participants in this pilot test positively evaluated the Open-CHA service after using it, suggesting the potential for further research on the feasibility of implementing OpenNotes in Korea. In this study, as an initial step toward introducing OpenNotes, the format of the Open-CHA service was adjusted to reduce the burden on healthcare providers. Instead of providing the extensive draft developed during the user needs assessment phase, only the essential information deemed necessary for

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the patient was briefly delivered via SMS.

In the evaluation of the Open-CHA service, 73.8% of participants were identified as caregivers, compared to 60% in the pilot test. This discrepancy highlights the unique needs of the target disease group, which predominantly consists of infants. It underscores the importance of tailoring patient services to the characteristics of the primary users [19]. Participants exhibited a relatively high trust in physicians, with an average score of 4.49. This suggests that they are likely to continue with prescribed treatments and follow medical advice. Consequently, the implementation of the Open-CHA service is expected to enhance treatment effectiveness [27].

Subjective health knowledge exhibited a slight, statistically insignificant decrease from 4.11 points pre-test to 4.04 points post-test. The evaluation items focused on whether patients were knowledgeable about their illness, understood medical explanations, and retained information provided by healthcare providers. Considering that many patients in the target group bring children to medical appointments, caregivers might experience confusion or tension, potentially accounting for this outcome [15]. Lam et al. [4] reported that 60.1% of service providers recognized the benefits of OpenNotes, 63.1% accessed information about treatments, and 44.3% recalled treatment plans, indicating that enhancing subjective health knowledge via OpenNotes could be beneficial. However, the limited effectiveness observed in this study, compared to that reported by Lam et al. [4], might be due to the fact that, unlike the 87.3% of participants who reviewed OpenNotes more than twice in the past year in the study by Lam et al. [4], the Open-CHA service in this study was provided only once.

Mobile health literacy significantly increased from 4.40 pre-test to 4.71 post-test (t = -2.55, p = 0.012). Improving mobile health literacy empowers vulnerable patients, like those in this study, to actively manage their health, thereby reducing the burden on the healthcare system [28]. It also provides patients with opportunities to access a wide range of health information and resources, enhancing their health knowledge and enabling them to make better decisions throughout the treatment process [29]. Therefore, improving mobile health literacy offers practical benefits, such as improving patient health in the long term, enhancing self-management abilities, and optimizing healthcare services. In this study, providing the Open-CHA service offered an opportunity to enhance patients' health knowledge, and its utilization is expected to provide tangible benefits to patients and contribute to reducing health disparities [30].

The study revealed a significant increase in mobile health literacy; however, no other intervention effects were noted. This outcome can likely be attributed to the study's focus on patients with rare diseases and their caregivers, a group typically facing restricted access to detailed information about their conditions. Moreover, the intervention consisted of only a single session. In contrast to OpenNotes, which offers extensive access to a patient's medical records, the Open-CHA service provided merely a summary of the day's outpatient visit and future management plans. This limited scope may have reduced its effectiveness. Consequently, further research is necessary to evaluate the viability of implementing OpenNotes in Korea.

This study offers valuable insights into the feasibility of implementing OpenNotes in South Korea. However, there are several limitations that must be considered. First, the participants in this study may have a proactive attitude towards treatment, which warrants caution in interpreting the results. Second, the absence of a control group in this single-group study limits the ability to control for confounding variables. Third, while the provision of OpenNotes may improve health literacy, this study was conducted solely in Korean, and thus did not assess the impact on foreign patients who do not speak Korean.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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Supplementary Materials

Supplementary materials can be found via https://doi.org/10.4258/hir.2024.30.4.333.

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