

Enhancing Caregiver-Provider Communication in Comprehensive Nursing Service with the Double Diamond Methodology

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Abstract. This study developed “Collabocare,” a mobile app prototype designed to improve communication in South Korea’s comprehensive nursing service. Using the Double Diamond methodology, we conducted desk research, interviews and created personas and user journey maps to identify caregiver needs. The app provides caregivers with real-time updates on patient care, including treatment plans, tests, and locations. It also features an AI assistant to answer common questions. Collabocare aims to reduce caregiver stress and improve provider workflow efficiency.

Keywords. Comprehensive Nursing Service, Communication, Double Diamond Methodology, Service design

1. Introduction

A comprehensive nursing service model adopted in South Korea eliminated the need for caregivers to stay at the bedside [1]. This separation often leads to anxiety and frustration among caregivers, as it limits their direct observation of treatment processes and delays their access to timely, accurate information. Miscommunication between caregivers and healthcare providers can result in complaints, follow-up calls, and conflicts, increasing healthcare providers’ workloads and potentially lowering the quality of care [2,3]. This study aimed to bridge this communication gap and enhance the experience of caregivers and healthcare providers.

2. Methods

The Double Diamond approach, consisting of four stages-Discover, Define, Develop, and Deliver—was utilized in the service design process [4]. Desk research and in-depth

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interviews were conducted with patients, caregivers, physicians, and nurses to identify each stakeholder's needs. Based on the gathered information, personas and user journey maps were developed. Key pain points were identified and the "How Might We" technique was applied to drive ideation.

3. Results

The key outcome of the design process is "Collabocare," a mobile application prototype developed to facilitate communication between caregivers and healthcare providers. Through this app, caregivers can access the patients' treatment plan and receive real-time updates on upcoming procedures, medical tests, dietary conditions, and the patients' location during their hospital stay. In addition, an artificial intelligence assistant is integrated into the app to help caregivers by answering frequently asked questions and sharing information from physicians' rounds.

4. Conclusion

"Collabocare" provides real-time access to patient information using digital technology with the aim of reducing caregiver stress and improving workflow efficiency for healthcare providers. While promising, its practical application and effectiveness require further evaluation. Future studies will be necessary to determine its impact on communication, the experiences of caregivers and patients in comprehensive nursing service units, and its scalability across diverse healthcare settings.

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