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AshaSetu: A Mobile Application for Streamlining Community Health Requests to ASHA Workers

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Abstract: *ASHA (Accredited Social Health Activist) workers form the backbone of India's primary healthcare delivery system, serving as the critical link between rural and semi-urban communities and government health services. However, the current methods of task assignment and community health request handling are largely manual, paper-based, and fragmented, leading to delays in service delivery and communication gaps. This paper presents AshaSetu, a mobile application developed using Android Studio and Firebase that digitizes and streamlines the process by which community members can submit health-related requests to their assigned ASHA worker. Users describe their health concern or requirement through the app, which then routes the request to the appropriate ASHA worker. The system supports emergency flagging, allowing critical requests to be prioritized and addressed first. The platform improves accountability, reduces response time, and enhances the overall efficiency of last-mile health service delivery.*

Keywords: ASHA worker, community health, mobile application, Firebase, Android Studio, emergency task management, health service digitization

I. INTRODUCTION

India's public health system relies heavily on Accredited Social Health Activists (ASHA workers), a cadre of community health workers appointed under the National Rural Health Mission (NRHM). Each ASHA worker is responsible for a defined geographic area, and their duties include facilitating access to health services, conducting awareness programs, assisting pregnant women, and addressing general health concerns raised by community members.

Despite their critical role, ASHA workers continue to operate in a largely manual and decentralized environment. Community members often have no formal channel to raise health requests or seek assistance, leading to delays in care, missed follow-ups, and administrative burdens. Additionally, urgent health situations are frequently not communicated in time, resulting in preventable complications.

AshaSetu addresses this challenge by providing a digital bridge between community members and ASHA workers. The application allows users to submit health requests describing their problem in simple text. The ASHA worker receives the request through the app and can take appropriate action. The system also supports emergency flagging, where users can mark a request as urgent so that the ASHA worker is immediately alerted and can prioritize accordingly.

Built using Android Studio and Google Firebase as the backend database, AshaSetu is designed to be lightweight, easy to use, and accessible to users with minimal smartphone experience. The application aims to modernize grassroots-level health communication while aligning with the Government of India's Digital Health Mission objectives

II. LITERATURE REVIEW

The digitization of community health delivery has attracted growing research interest over the past decade. Several studies have explored mobile health (mHealth) platforms as tools to improve the efficiency and reach of frontline health workers in low-resource settings.

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Kumar and Mishra [1] examined the operational challenges faced by ASHA workers in rural India, identifying poor communication infrastructure and excessive paperwork as primary barriers to effective service delivery. Their study concluded that digital tools tailored for frontline workers could significantly reduce these inefficiencies.

Sharma and Rao [2] explored the adoption of mobile applications among community health workers in developing countries. Their findings suggest that simplified user interfaces, regional language support, and offline functionality are key determinants of successful adoption among workers with limited digital literacy.

Singh and Verma [3] analyzed task management systems in public health programs and found that real-time task assignment and status tracking reduced service delays by up to 40% in pilot deployments. These findings highlight the importance of structured digital task workflows for health workers.

Patel and Joshi [4] studied the role of Firebase as a backend solution for healthcare mobile applications. Their research demonstrated that Firebase's real-time database capabilities are well-suited for applications requiring instant data synchronization between users and service providers, making it an appropriate choice for health request management systems.

Gupta and Nair [5] specifically investigated emergency alert mechanisms in mHealth platforms and concluded that explicit emergency flagging features substantially improved response times and resource prioritization in community health programs.

The existing literature confirms the need for a purpose-built digital platform for ASHA workers that supports structured request submission, real-time communication, and emergency prioritization. AshaSetu is developed to fulfill these identified requirements in a practical and deployable form.

III. EXISTING SYSTEM

Several platforms have attempted to address aspects of community health communication and frontline worker management:

A. ASHA Soft

A government-initiated reporting tool used in several Indian states that allows ASHA workers to submit data on beneficiaries and services rendered. However, it functions as a one-way reporting tool and does not support community members in submitting requests or communicating directly with their assigned ASHA worker.

B. mSakhi

A mobile application used to support ASHA workers in tracking maternal and child health data. While effective for record-keeping, it is designed for health worker use only and does not provide a channel for community members to raise concerns or request services.

C. Dimagi CommCare

A global mHealth platform used to support community health workers with data collection and task management. Although feature-rich, it is complex to configure, requires ongoing technical support, and is not specifically designed for the ASHA worker ecosystem in India.

A common limitation across these systems is the absence of a community-facing interface that allows users to initiate contact with their ASHA worker, describe their health concern, and flag emergencies. AshaSetu is specifically designed to fill this gap by enabling two-way, structured communication between community members and ASHA workers through a simple mobile interface

IV. PROPOSED METHODOLOGY

AshaSetu is developed as an Android mobile application using Android Studio, with Google Firebase serving as the real-time backend database. The system is structured around two primary user roles: the Community User and the ASHA Worker.

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A. Community User Module

Community members can register on the application using their mobile number and basic location details. Once logged in, users can submit a health request by describing their problem or concern in a text field. The request is saved to Firebase and routed to the ASHA worker assigned to the user's area. Users can also mark any request as an emergency, which triggers a priority alert to the ASHA worker, distinguishing it visually from routine requests in the worker's dashboard.

B. ASHA Worker Module

ASHA workers log in to the application and are presented with a task dashboard that lists all pending requests from community members in their assigned area. Requests are displayed in order of priority, with emergency requests highlighted separately to ensure immediate visibility. The worker can view the details of each request, take action, and update the task status to reflect whether it is pending, in progress, or resolved.

C. Emergency Flagging System

A key feature of AshaSetu is its emergency request mechanism. When a user marks a request as an emergency, the Firebase database updates the request record with an emergency flag. The ASHA worker's app immediately reflects this change due to Firebase's real-time synchronization capability, ensuring that critical situations receive prompt attention without delays caused by manual filtering.

D. Firebase Backend

Firebase Realtime Database is used to store all user profiles, ASHA worker records, and health requests. The real-time synchronization feature ensures that any update made by a community user is instantly visible to the relevant ASHA worker, and vice versa. Firebase Authentication is used to manage secure login for both user types.

The overall workflow of the system is as follows: the community user submits a request, Firebase stores and routes the request to the appropriate ASHA worker, the ASHA worker receives and reviews the request, the worker takes action and updates the task status, and the community user can view the updated status of their request.

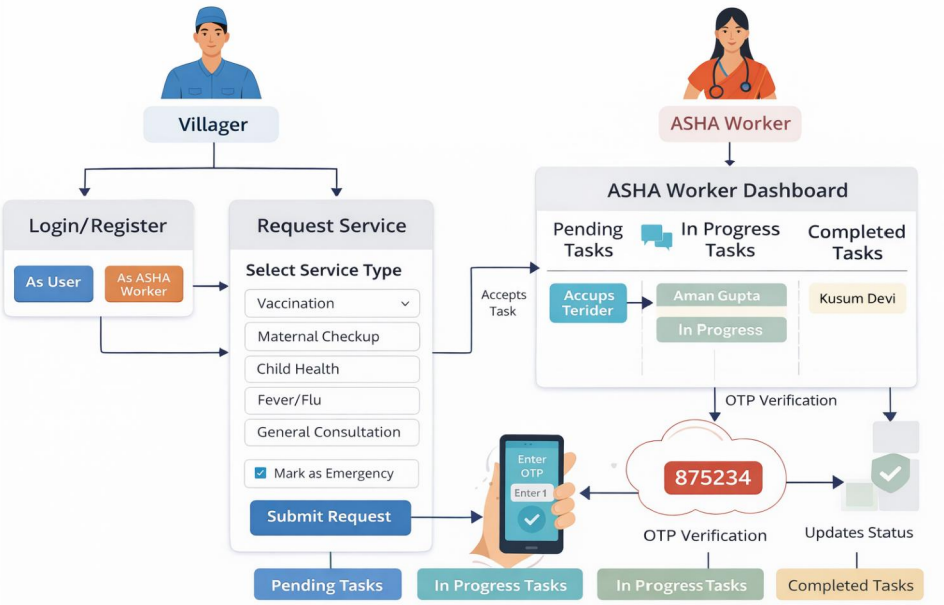

Fig.1 System Flow Diagram

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V. CONCLUSION

AshaSetu presents a practical and accessible digital solution to one of the most persistent challenges in India's community health system — the lack of a structured communication channel between ASHA workers and the communities they serve. By enabling community members to submit health requests digitally and ASHA workers to manage and prioritize those requests through a mobile interface, the application improves the speed and accountability of grassroots health service delivery.

The emergency flagging feature ensures that critical situations are not overlooked in the queue of routine requests, which can have a direct impact on health outcomes. Built on Android Studio and Firebase, the system is reliable, scalable, and cost-effective for deployment in both rural and semi-urban settings.

Future enhancements to AshaSetu may include regional language support to improve accessibility for users with limited English proficiency, offline functionality for areas with poor network connectivity, push notification support for real-time alerts, and integration with government health databases for seamless reporting and record maintenance

The proposed system simplifies the overall vehicle rental process and enhances the experience for both customers and service providers.

Future improvements may include integration of GPS tracking systems, online payment gateways, and mobile application support to further enhance system functionality.

REFERENCES

[1]. S. Kumar and R. Mishra, "Operational Challenges Faced by ASHA Workers in Rural India and the Scope for Digital Interventions," International Journal of Public Health and Community Medicine, vol. 4, no. 2, pp. 33–41, 2020.

[2]. P. Sharma and K. Rao, "Mobile Application Adoption Among Community Health Workers in Developing Nations: Key Success Factors," Journal of Health Informatics in Developing Countries, vol. 14, no. 1, pp. 12–22, 2021.

[3]. A. Singh and M. Verma, "Digital Task Management Systems in Public Health Programs: A Review of Efficiency Improvements," International Journal of eHealth and Medical Communications, vol. 11, no. 3, pp. 58–67, 2022.

[4]. N. Patel and H. Joshi, "Firebase as a Real-Time Backend for Healthcare Mobile Applications," International Journal of Advanced Computer Science and Applications, vol. 12, no. 5, pp. 210–217, 2021.

[5]. R. Gupta and S. Nair, "Emergency Alert Mechanisms in mHealth Platforms and Their Impact on Response Time," Journal of Medical Systems, vol. 45, no. 8, pp. 1–9, 2021.