Viewpoint

Digitalization of ASHA Work: Challenges and Way Forward

Running Title: Digitalization of ASHA Work

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Abstract: The digitalization of the work of Accredited Social Health Activists (ASHAs) represents a pivotal step towards modernizing healthcare delivery at the grassroots level in India. This paper explores the impact of digital tools on ASHA performance, with a specific focus on non-communicable disease (NCD) screening using the Community-Based Assessment Checklist (CBAC) form. While digitalization holds immense potential for improving efficiency, data accuracy, and transparency, challenges such as limited digital literacy, data integrity, and incentive structures must be addressed to fully harness its benefits. This review discusses the opportunities and limitations posed by digitalization, emphasizing the need for comprehensive support systems to ensure the success of this transformation.

Keywords: ASHA, Community-Based Assessment Checklist, Digitalization, NCD

Introduction

India's healthcare system is undergoing a transformation, with digitalization playing a central role in enhancing public health initiatives. Accredited Social Health Activists (ASHAs), who serve as the frontline workers in rural healthcare, are

crucial to the success of these initiatives [1]. Their responsibilities include maternal and child health services, immunization drives, and screening for non-communicable diseases (NCDs) among adults. Recently, the introduction of digital tools has sought to streamline their work, improving the efficiency of reporting and data management. However, while these tools offer several advantages, there are concerns regarding their impact on the quality of work, data transparency, and the accuracy of health assessments.

This review evaluates the impact of digitalization on ASHAs' work, with a focus on the mass screening of the 30-plus population for NCDs using the digitized CBAC forms. It also discusses key challenges and potential solutions to improve the digital transition for ASHAs.

Digitalization and Its Potential Benefits

The digitalization of ASHAs' work, particularly through mobile apps and online reporting systems, has been viewed as a way to improve the efficiency of healthcare delivery. The shift to digital CBAC forms for NCD screening promises real-time data collection and reporting, better accessibility to patient records, and more accurate tracking of health outcomes [2]. These tools are also expected to provide ASHAs with instant communication channels with supervisors and healthcare authorities, enabling faster decision-making and interventions.

Key potential benefits include:

- **Efficiency:** Real-time data entry eliminates the need for paper-based reporting, streamlining ASHAs' workflows and reducing the administrative burden.
- **Transparency:** Digital records allow for improved accountability, as they provide clear, traceable pathways of the data reported by ASHAs.
- **Better Data Management:** Health data collected digitally can be centralized, enabling policymakers to make informed decisions based on up-to-date information from rural and underserved areas.

Challenges Faced by ASHAs in the Digital Transition

Despite the promises of digitalization, several challenges have emerged, particularly in rural and resource-poor settings where most ASHAs operate.

- **Limited Digital Literacy:** Many ASHAs are not familiar with digital tools and require significant training to adapt to using smartphones, apps, and online reporting systems. This lack of familiarity can lead to incorrect data entry, confusion, or even reluctance to use these systems, potentially undermining the accuracy of health data.
- **Inadequate Infrastructure:** Rural areas often lack the necessary infrastructure for digital healthcare initiatives, such as reliable internet connectivity and access to smartphones or tablets. Without these resources, ASHAs may be unable to complete their tasks, resulting in delayed or incomplete data reporting.
- **Accuracy of Screening Data:** The accuracy of data collected during mass screening for NCDs is essential for effective public health interventions. However, digital tools alone cannot ensure accuracy without adequate training, supervision, and validation processes. There is a risk that the rapid shift to digital systems may result in errors or inconsistencies in screening data, especially if ASHAs are not properly supported.

Addressing the Issue of Data Accuracy

The mass screening of the 30-plus population for NCDs using the CBAC form is a key initiative in India's public health efforts. Digitalization of these forms can improve data accuracy and speed up reporting. However, for this to be effective, several measures must be implemented:

- **Training and Capacity Building:** Comprehensive training programs are required to ensure that ASHAs are proficient in using digital tools. This includes technical training on how to enter data accurately, verify it, and troubleshoot common issues.
- **Validation Algorithms:** Digital platforms should incorporate validation algorithms that can detect

inconsistencies, missing fields, or outliers in the data. These system checks can alert ASHAs and their supervisors to correct errors before submission [3].

- **Supervision and Audits:** Regular audits of the data collected by ASHAs should be conducted by healthcare professionals or supervisors to ensure that the screening data remains accurate and actionable. Periodic feedback can help ASHAs improve their data collection practices [4].

The Incentive Issue

An additional factor that impacts ASHAs' motivation to embrace digital tools is the incentive structure. ASHAs are often underpaid, with delayed or inadequate incentives for their work. With the introduction of digital systems, their workload has increased as they must now manage digital reporting alongside their fieldwork. Addressing the issue of incentives is crucial for maintaining their motivation and ensuring the success of digital initiatives.

A transparent, streamlined incentive system that directly ties rewards to ASHAs' performance—tracked digitally—can improve both motivation and data quality. When ASHAs see direct, timely benefits from their efforts, they are more likely to engage positively with the digital tools provided.

Conclusion

The digitalization of ASHA work represents a promising step forward in enhancing the efficiency and transparency of India's healthcare delivery system. However, its success depends on how well the challenges related to digital literacy, infrastructure, data accuracy, and incentives are addressed. By investing in capacity building, implementing robust data validation systems, and ensuring that ASHAs are fairly compensated for their work, the healthcare system can fully leverage the potential of digital tools while safeguarding the quality of community health interventions. As India continues to battle its NCD burden, ensuring the accuracy and reliability of mass screening data will be key to driving impactful public health outcomes.

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