

## Appraising the Digital Implementation of Chiranjeevi Swasthya Bima Yojana in Rajasthan: Benefits and Challenges

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### ABSTRACT

The Government of Rajasthan launched the Chiranjeevi Swasthya Bima Yojana (CSBY), a state-sponsored health insurance scheme, in September 2019. The objective was to provide affordable health care to the entire state population, regardless of socioeconomic status. The enrolment and delivery of this system warrant the use of digital pathways to increase accessibility and enhance beneficiary engagement. This study attempts an appraisal of digital mechanisms of CSBY regarding its enrolment process and beneficiaries' access to it. Simultaneously, it explores the benefits and challenges of implementing this scheme digitally. A prospective, randomized cluster survey was carried out among patients and their families, health care workers, and personnel involved in the delivery of CSBY. To study the respondents, a 5-point Likert-scale research tool was developed, comprising questions on selected factors related to the enrollment process. For research variables, effective healthcare delivery factors (process time, process efficiency, transparency, digital infrastructure) were extracted using Exploratory Factor Analysis (EFA). Multiple linear regression was used to assess how these variables influenced healthcare efficiency. To seek beneficiaries' opinions on the benefits and challenges of CSBY, telephonic and personal interviews were conducted. Results revealed that, if further improved, process efficiency and digital infrastructure would foster effective healthcare delivery through CSBY across Rajasthan.

**Keyword(s):** Digital Health, Mukhyamantri Chiranjeevi Swasthya Bima Yojana, Public Health Insurance, Process Efficiency, Benefits

### INTRODUCTION

The state of Rajasthan is the largest in area with 3,42,239 square kilometers. Its population, as per the Census 2011, is 6.85 crores, with a literacy rate of 69.7%, ranking it third last in terms of literacy. The female literacy rate in Rajasthan (57.6%) and the state's GDP are both the lowest amongst all states in India. To support the existing healthcare system, the Rajasthan Government has initiated the CSBY on 1<sup>st</sup> September 2019. The state was previously endowed with the Bhamashah Swasthya Bima Yojana (BSBY) health scheme in 2014.

To improve the healthcare economy and reduce the Out-of-Pocket Expenditure (OOPE) of the population, the Government has to absorb the economic burden. The central government, along with several state governments, has introduced a few health insurance schemes for those sectors that cannot afford it. One of them was the Pradhan Mantri Jan Arogya Yojana, which was renamed the Ayushman Bharat Swasthya Bima Yojana (ABSBY) on 1<sup>st</sup> September 2018.

The implementation of digital technologies in the delivery of health care services is a unanimous mandate in today's era for developed and developing nations alike. In its Consensus document (Dzenowagis, 2018) The WHO reiterated the adoption of digital health practices and

noted that by 2015, 120 countries had adopted a national health policy on digital health. In its recommendation, the European Union taskforce set up an expert panel to figure out deliverables in digital health care investing and urged governments across the boundaries to adopt digital practices in the implementation of public healthcare initiatives (Ricciardi, 2019).

There are two divergent definitions of digital implementation in public health – one refers to the re-orchestration of public health delivery pathways using newer digital tools, while the other, “digitization,” focuses on the technical process of converting analogue into digital records and progressively integrating newer technologies into the operational aspect of public health care delivery. (Iyamu et al., 2021).

In 2018, the Indian government launched the ABSBY, a nationwide health insurance programme. This program's overarching objective is to help bring about a new India that is healthier, more prosperous, and more at peace with itself by accomplishing two specific goals: (1) building a system of health and wellness infrastructure across the country to provide comprehensive primary healthcare services, and (2) expanding access to health insurance for the 40% of the Indian population that lacks access to both secondary and tertiary care.

The Ayushman Bharat scheme has an increasing number of more than 21,000 empanelled providers (Majumdar, 2019) which gives an estimate of the magnitude of human resource requirement for schemes of this size. The scheme's long-term profitability and sustainability depend on the financial health of all participating parties. This is especially true for expensive, high-volume surgeries and those performed at hospitals affiliated with large corporations. Inflation and growing manufacturing prices call for careful consideration as you plan your payment schedule. In their review of the financials of public funded health care insurance in India, (Reshmi et al., 2021) Findings indicated that users of various national and state PFHIs increased their use of healthcare services, but there was no clear indication that beneficiaries' financial risk was reduced. For the plan to succeed eventually, this crucial component must be thoroughly examined. There are several key areas of focus when deploying a public insurance initiative of this magnitude, including the availability of resources, financial viability, adoption of newer technologies, identification of eligible beneficiaries, patient confidentiality, and cybersecurity.

A study on digital healthcare systems in Kazakhstan (Senbekov et al., 2020) emphasized that the application of digital healthcare platforms optimizes the overall healthcare delivery experience. However, standardisation protocols are mandatory for seamless information exchange among stakeholders.

Digital literacy among the population remains an Achilles' heel for any attempt to deploy public healthcare systems digitally. The process has been scanned by various publications focusing on the implementation process and challenges in various geographies and various population subsets. In a review of the Australian healthcare system (Baum et al., 2012), the impact of digitization was equivocal in the lower socioeconomic groups, and their levels of economy or literacy profoundly impacted their utilization of these resources, even when available. The Government must priorities providing hospitals with the necessary hardware, software, and technical staff. To further enforce the laws, it will be necessary to conduct technological and data audits on providers and insurers in the future.

The storage of electronic health records and the digital transfer of cashless payment contain sensitive data for which robust security systems are mandated. In their publication on blockchain in secure healthcare systems, (8) advocated improvement of block chain technologies and focussed data mining, storage, and audit. The same problems plague the electronic payment gateways in the banking and e-payment sectors. In their publication on electronic payment security, (Hassan et al., 2020) said that protective qualities including availability, authorisation, integrity, non-repudiation, authentication, and confidentiality are needed for electronic payment to close the gaps. These ideas help when applying the CSBY system's cashless reimbursements. The evaluation of digital systems in public health in Latin America shed light on the role of newer information and communication technologies in dissipating the socio-economic inequities and bridging the digital gaps. (Filho, 2002).

Various state Governments and Government sponsored health schemes have been launched in the recent past with similar objectives - the Swasthya Sathi scheme in West Bengal, Yeshaswini scheme in Karnataka, Mahatma Jyotirao Phule Scheme in Maharashtra, the Rashtriya Swasthya Bima Yojana (RSBY). A cross sectional review of the impact of government funded health insurance schemes in India shed light on the existing disparities between set targets and goal fulfilment. It also emphasized the need for increased availability of hospitals in proximity to the underserved areas since that stood out as the primary determinant for increased access to healthcare (Kumar, 2019). Unfortunately, critical evaluation of some of these schemes e.g. RSBY revealed that they did not significantly impact the medical OOPE of the beneficiary but actually increased non-medical OOPE by 5% (Karan et al., 2017).

There are two publications focused on CSBY. An evaluation of the awareness of scheme's availability concluded that while most of the population was aware of the schemes (13) Their implementation was suboptimal. In their review of the insurance model, the authors deduced that this model had better acceptance and provisions than the private health insurance and their applicability across other states was an ideal situation (Vaish & Sharma, 2021).

### Chiranjeevi Swasthya Bima Yojana (CSBY) - An Overview

The CSBY encompasses beneficiaries under the National Food Security Act, SECC, beneficiaries of BSBY, contractual employees, small and marginal farmers, covid ex gratia and paid categories. The CSBY portal has a dynamic display of continuous real time enrollment. The total number of registered families is 13,394,252 (as on 6th November 2023) amongst which 2,357,115 have availed the scheme.

The distribution of beneficiaries under paid and free categories are given in Table 1 and the composition of the wallet for a family is given in Table 2.

**Table 1 The Distribution of the Beneficiaries under Paid and Free Categories**

Types of Beneficiaries	Categories of Beneficiaries	Count of Beneficiaries
Free	Farmers (Small & Marginal)	1,440,028
	Contractors (All Departments/Boards/Operations/Government Companies)	50,791
	National Food Security Act (NFSA)	10,707,161
	Eligible families for Social Economic Census	9,761

Types of Beneficiaries	Categories of Beneficiaries	Count of Beneficiaries
	Covid 19 Ex gratia	337,452
Paid Rs.850, per family per year	Paid families	849,059

Source: <https://CSBY.rajasthan.gov.in/#/home>

**Table 2 CSBY Wallet Composition for a Family**

Types of Wallets	Criteria	Amount
Secondary Wallet	For minor ailments and stay up to 24 hours	Rs.50,000
Tertiary Wallet	For major ailments. Stay more than 24 hours	Rs.4,50,000
On approval	Major and complex interventions	Rs. 5,00,000

Source: Author Compilation

The beneficiaries of CSBY have 5 Lakh rupees in their wallet for the entire family. Also, if any major procedures are incurred, an additional 5 Lakh rupees may be availed after the necessary approvals.

### Study's Objectives

The current study aims:

1. To appraise the digital mechanisms of CSBY with regard to the enrolment process and access to it by the beneficiaries.
2. To explore the benefits and challenges in the implementation of this state public healthcare insurance scheme digitally.

### Methodology

The study was conducted as a randomized, clustered survey among patients, healthcare personnel, government officials, and E Mitra employees involved in enrollment and availing CSBY. A structured questionnaire, using a 5-point Likert scale, was used to capture digital mechanisms of enrolment and to assess the CSBY. A combination of telephonic and personal interviews was conducted to collect the cross-sectional data. Hospitals were chosen based on purposive sampling, whereas different categories of respondents were approached using simple randomized sampling. The purposive sampling method was applied because the digital platform used for registering CSBY and the digital procedure to avail of is similar across the entire facility-based population. A private corporate based hospital having the CSBY

Scheme facility in 3 departments i.e., Orthopedic, ENT, Urology; a government pediatric hospital and a large (1500 bedded) private medical college and hospital where all the departments had CSBY scheme facilities were selected to carry out the study.

The survey was conducted using a randomized sampling technique for the following type of respondents, where the total sample size (n=173) constituted:

- Patient, Attendant and Guardian (n=120): 50 patients and 20 attendants from the Private medical college Hospital, 35 attendants from the Government pediatric hospital, 10 patients and 5 attendants from the corporate hospital.
- Hospital comprising of Doctors, IT personnel, health care workers closely associated with the process of the CSBY (n=44): 15 doctors from Private medical college Hospital, 8 doctors from the Govt pediatric hospital, and 3 doctors from corporate Hospital, 10 IT Personnel from all the hospitals, and 8 healthcare workers closely associated with CSBY.
- EMitra officials of Jaipur (n=5) were interviewed to understand the digital process of CSBY.
- Government Officials who deal with the digitalization and cybersecurity of the CSBY Scheme (n=3) were also interviewed.

### Results

During the literature review, various factors impacting healthcare delivery in different zones were explored, and to extract the most specific determining factors specifically for CSBY in Rajasthan, the researchers have used EFA.

Tables 3, 4, and 5 present the details of the results and inferences drawn.

**Table 3 Results of KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.871
	Approx. Chi-Square	3222.634
Bartlett's Test of Sphericity	Df	300
	Sig.	0.000

Kaiser-Meyer-Olkin Measure (KMO) of sampling adequacy is mandatory in accepting/ rejecting sample adequacy. Usually, the KMO value lies between 0 and 1. In Table 3, the KMO value is 0.871. This shows a significant relative correlation/overlapping information among variables. Factor analysis is justified.

**Table 4 Total Variance**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
The time taken to scan the documents at the time of admission is appropriate.	8.228	32.910	32.910	8.228	32.910	32.910
The time taken to scan the documents at discharge is appropriate.	5.465	21.859	54.769	5.465	21.859	54.769
The time taken to upload the mandatory documents at the time of admission is appropriate.	2.278	9.113	63.882	2.278	9.113	63.882
How likely is it that the patient data will be secured?	1.097	4.386	68.268	1.097	4.386	68.268
The time taken to start the treatment is satisfactory.	0.943	3.772	72.040			
The remuneration process, including all the entailed procedures, is up to mark.	0.932	3.729	75.769			
The time period for approving or rejecting the claim is appropriate.	0.709	2.838	78.607			
Experience with the time period of the query of the claim is satisfactory.	0.621	2.482	81.089			
The time period for the appeal, if the claim has been rejected, is appropriate.	0.487	1.947	83.036			
The information provided in the package details document is appropriate.	0.459	1.837	84.874			
The time period to enrol in Jan Aadhaar is appropriate.	0.432	1.729	86.603			
The time period for enrolment in the Chiranjeevi Swasthya Bima Yojana is appropriate.	0.393	1.570	88.173			
Your experience of enrolling in the Jan Aadhaar Card is satisfactory.	0.375	1.501	89.674			
You can access your personal health check-up record digitally at any point in time.	0.365	1.462	91.136			
The concerned hospital can always access the information through the Jan Aadhaar Card.	0.318	1.273	92.409			
Your query related to the process is always answered on the digital platform.	0.282	1.129	93.538			
You are provided with sufficient assistance with the processes on the Chiranjeevi Portal.	0.251	1.002	94.540			
It takes more time to upload the mandatory documents at the time of discharge.	0.233	0.933	95.472			
There is a very low probability of getting your claim rejected.	0.231	0.925	96.397			
An appropriate appellate authority exists to hear the beneficiary's appeal against claim rejection.	0.200	0.799	97.196			

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
You find the Chiranjeevi Portal user-friendly.	0.182	0.728	97.924			
How likely is the digital literacy to help you operate the Chiranjeevi Portal?	0.170	0.681	98.605			
Do you think digital literacy helps you operate the Chiranjeevi Portal effectively?	0.144	0.574	99.179			
An appropriate infrastructure is provided to the hospitals for the proper functioning of Chiranjeevi Yojana.	0.113	0.452	99.631			
The file size limit is appropriate while uploading on the Chiranjeevi Portal.	0.092	0.369	100.000			
Extraction Method: Principal Component Analysis.						

The total variance across all components is greater than 1. The 4 extracted factors account for 68.27% cumulative

variance in effective healthcare delivery, according to Table 4. The observed values of the factor loadings in the table value given are more than the prescribed value of 0.4 (Guadagnoli, E., & Velicer, 1998).

**Table 5 Results of Component Matrix for Four Factor**

<i>Component Matrix<sup>a</sup></i>				
	Component			
	1	2	3	4
The time taken to scan the documents at the time of admission is appropriate.	0.821			
The time taken to scan the documents at discharge is appropriate.	0.784			
The time taken to upload the mandatory documents at the time of admission is appropriate.	0.771			
How likely is it that the patient data will be secured?				0.664
The time taken to start the treatment is satisfactory.	0.822			
The remuneration process, including all the entailed procedures, is up to mark.				0.761
The time period for approving or rejecting the claim is appropriate.	0.800			
Experience with the time period of the query of the claim is satisfactory.	0.820			
The time period for the appeal, if the claim has been rejected, is appropriate.	0.688			
The information provided in the package details document is appropriate.				0.743
The time period to enrol in Jan Aadhaar is appropriate.	0.756			
The enrolment period for CSBY is appropriate.	0.726			

Your experience of enrolling in the Jan Aadhaar Card is satisfactory.		0.740		
You can access your personal health check-up record digitally at any point in time.		0.759		
The concerned hospital is always able to access the information through the Jan Aadhar Card.		0.622		
Your query related to the process is always answered on the digital platform.		0.776		
You are provided with enough assistance regarding processes on the CSBY Portal.		0.656		
It takes more time to upload the mandatory documents at the time of discharge.	0.654			
There is a very low probability of getting your claim rejected.		0.640		
An appropriate appellate authority exists for listening to the beneficiary on claim rejection.		0.774		
You find the CSBY Portal user-friendly.		0.749		
How likely does the digital literacy help you to operate the CSBY Portal?			0.620	
You think that digital literacy helps you to operate the CSBY Portal effectively.		0.622		
An appropriate infrastructure is provided to the hospitals for proper functioning of CSBY Yojana.			0.880	
File size limit is appropriate while uploading on the CSBY Portal.			0.796	
Extraction Method: Principal Component Analysis.				
a. 4 components extracted.				

### Extracted Factors

From Table 4, the first factor comprised 10 items; thus, it was renamed as Process Completion Duration. This extracted factor from Table 5 explained 32.91% of the variance as a process mechanism. Similarly, the second factor comprised 10 items, renamed as Process Efficiency, and the extracted factor was able to explain 21.859% of variance as a process mechanism. factor comprised of 3 items and was renamed as Digital Infrastructure Adequacy. The extracted factor was able to explain 9.113% of variance as process mechanism, and the fourth factor had 3 items; hence, it was renamed as Digital Infrastructure Adequacy, and the extracted factor was able to explain 4.386% of variance as process mechanism.

### Regression Analysis

To see the impact of the aforementioned factors on the effectiveness of healthcare delivery, a multiple regression model was run. The fitted regression model showed that Effective Health Care Delivery = 0.415 + 0.420 Process Completion Duration + 0.154 Digital Infrastructure adequacy + 0.127 Process Efficiency + 0.231 Transparency.

**Table 6 Model Summary of Variables Predicting Effective Health Care Delivery**

<i>Model Summary</i>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.774 <sup>a</sup>	0.599	0.589	0.781
a. Predictors: (Constant), Process Efficiency, Transparency, Process Completion Duration, Digital Infrastructure adequacy				

Effective Healthcare delivery is highly correlated with the aforementioned factors. (Refer to Table 6)

**Table 7 Significance of the Proposed Model**

<i>ANOVA<sup>a</sup></i>					
Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	152.690	4	38.172	62.628	.000 <sup>b</sup>
	Residual	102.397	168	0.610		
	Total	255.087	172			
a. Dependent Variable: Effective Healthcare delivery						
b. Predictors: (Constant), Process Efficiency, Transparency, Process Completion Duration, Digital Infrastructure adequacy						
The Anova Table (Table 7) indicates that the proposed model is significant (p<0.05).						

**Table 8 Regression Coefficient of Variables Predicting Effective Health Care Delivery**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		$\beta$	Std. Error	B		
1	(Constant)	0.415	0.228		1.820	0.071
	Process Completion Duration	0.420	0.071	0.427	5.936	0.000
	Digital Infrastructure adequacy	0.154	0.070	0.165	2.220	0.028
	Transparency	0.231	0.056	0.224	4.108	0.000
	Process Efficiency	0.127	0.062	0.134	2.036	0.043
a. Dependent Variable: Effective Healthcare delivery						

As stated in Table 8, it was found that process completion duration ( $\beta = 0.42$ ,  $p < 0.000$ ), transparency ( $\beta = 0.231$ ,  $p < 0.000$ ), process efficiency ( $\beta = 0.127$ ,  $p < 0.05$ ), and Digital Infrastructure ( $\beta = 0.154$ ,  $p < 0.05$ ) significantly contributed to the effective healthcare delivery. Amongst all these factors, Process completion duration and Transparency contribute the most to effective healthcare

delivery. Hence, if process efficiency and digital infrastructure are further improved, effective healthcare delivery through CSBY may be enhanced.

### Key Findings from Personal and Telephonic Interviews

In the earlier section, key stakeholders of the CSBY scheme were approached to seek their opinions on the process completion duration, transparency, process efficiency, and digital infrastructure. Further, to understand the benefits and challenges of CSBY from the aspect of patients, healthcare workers, government officials, and EMitra officials, a follow-up interview (telephonic and personal) was conducted, and the key findings based on their perceptions were summarized as under:

### Benefits

The study highlights several benefits of the CSBY digital systems. For the first time, Government databases have permanent Electronic Medical Records (EMR), which will augment research, analytics, and epidemiologic trends. For subsequent follow-ups, the patients' records were retrieved from the T\_ID history, so the patients did not need to carry physical health records. It has been observed that no fraudulent activities are taking place on the CSBY platform. The volumes of beneficiaries with access to tertiary level health care have received a significant boost, thanks to CSBY, especially from the rural and economically marginal backgrounds. From the analytics, it is evident that patients are more reliant on private health institutions for high-end health care deliverables.

### Challenges

Any disruptive innovation of this magnitude is accompanied by several challenges, broadly categorized into implementation-stage and maintenance-phase challenges. Documentation challenges, in some cases, patients have mismatches in their names and date of birth as mentioned in their Aadhar and Jan Aadhar cards against information logged in the system, causing delays in treatment. The documentation process is lengthy and, hence, challenging. Infrastructure challenges are increasing number of people with access to smartphones and internet connectivity, but a large population, especially from the marginal or rural sections, are scarcely using digital healthcare resources. Hospitals, too, are faced with technical hurdles like a lack of dedicated broadband service for CSBY. Relying on the public health center's internet connectivity increases process times. The turnaround times for uploading documents at the time of admission and discharge also adversely affect the process outcomes. Referred hospitals were found to be struggling to access their previous EMR for clinical use. Authorization. Since the auto-checked system for the mandatory documents is not available on the CSBY portal, it was found that the queries after claim submission increase. For the Inpatient Department (IPD), especially for the tertiary care services, where auto-authorisation does not take place, the procedures get delayed. Lack of standardization, found that there is no Standard Operating Procedure (SOP) designed for the CSBY scheme. Intermittent training and documentation for the CSBY

portal are provided by the government officials. However, many of the new joiners were unable to use the portal independently. No fixed timeline is provided for the closure of appeals against rejections. Technical challenges, a data-intensive system like this requires an appropriate digital infrastructure commensurate with data analytics, cloud storage, and big data analytics. Without data analytics, the ability to predict an upsurge of communicable diseases and its implications for the concerned health authorities is lacking. We observed that many patients are not receiving SMS reminders for the outstanding CSBY wallet balance on time. Patient confidentiality is a lack of focus on patient confidentiality protocols.

### Discussions

The current study identifies primarily four factors impacting healthcare delivery outcomes, namely process completion duration, transparency, process efficiency, and digital infrastructure. The most enriching finding is that process completion duration and transparency of the CSBY system is at optimum. Several studies have highlighted challenges in the use of digital health systems or their subsidiaries such as telemedicine (Stronge et al., 2008), clinical decision support systems (Fossum et al., 2011), tele orthopedics (Caffery et al., 2017), and health information technology (Alohali et al., 2020). A significant deterrent to optimization was the personnel or staff efficiency and their ability to learn and adapt workflow processes.

From the present study it was observed that data entry, information flow and transfer of clinical data were factors which impacted the process completion duration. A similar finding was reported by several other studies which pointed out that human errors and incremental process times in data entry and uploading adversely affected the process times amongst health care personnel and technical operators alike (Campling et al., 2017), (McAlearney et al., 2013). In addition to the above process efficiency was significantly slowed by introduction of ehealth innovations which were disruptive for workflow, increased the time spent on the system, imposed cumbersome documentation requirements, and led to overall decrease in the process efficiency. Similar trends were described by prior studies focused on these areas (Kelly et al., 2017), (Ser et al., 2014). To put things into perspective data accessibility, organizational support, work flow efficiency, digital literacy and work flow integration were essential components to an optimal and efficient digital healthcare delivery system (Whitelaw et al., 2021). Another significantly impactful factor discovered is the optimal availability of local digital infrastructure – hardware, internet connectivity, trained technical personnel, SOP for workflow and outage protocols. This finding is echoed emphatically in several studies which reiterate the same conclusion (Ser et al., 2014).

### Implications of the study

The present study elaborates that amongst all the ambient factors for an optimized digital ecosystem required, process efficiency and digital infrastructure required a critical appraisal. Dedicated local infrastructure can

further process efficiency and expedite process duration as well. These key takeaways, if addressed can further the end user digital process experience in the entire state and may be extrapolated to all digital platforms across the country. Thus, standardization of infrastructure and process flow can form the edifice of a strong digital health framework.

### Suggestions

Our study and analysis of the CSBY digital processes sheds light on the following issues- Technical infrastructure, creation of an integrated software platform so that all hospitals and stake holders can access EMR expeditiously. The availability of high-capacity machineries for faster uploading of documents, dedicated internet for CSBY, dedicated and trained technical staff will facilitate the output. In terms of anticipated technical outage, prior intimation, and effort to reduce the turnaround times should take place. Embracing newer technologies: It was found that hefty documentation is instrumental in delaying the process of treatment, hence digital reports should be integrated, uploaded, and shared expeditiously. SMS about the wallet details should go to every patient with the help of the mobile numbers registered in the Aadhaar Card. Also, a mechanism should be initiated for patient approval prior to his medical records being shared. In the coming future, with the help of artificial intelligence and the big data gathered through the CSBY process, apps and websites can be developed where based on the symptoms, the basic ailment or the probable ailment may be identified and the list of hospitals and doctors for the area where the patient lives may be displayed. As clinical reports and discharge summaries are uploaded for each patient, big data analytics may help predict solutions and epidemiological data gathering for various public health problems and evolution of disease theories. The adoption of block chain technology in healthcare can address a variety of difficulties such as care coordination, data security, and interoperability. Digital literacy: the long-term sustainability of such projects requires the government to invest in enhancing digital literacy. Providing smart phones and app-based technologies is effective but requires mentorship and individual tutoring. Training ground level proctors for this will go a long way in strengthening this endeavor.

### Conclusion

The CSBY Health scheme mirrors the Government initiatives to deliver quality healthcare to all the citizens of Rajasthan at an affordable price. Almost 80 percent of the population of Rajasthan has been enrolled under CSBY which may act as an economic canopy to the society. With the right outcomes and approaches, this can be a game changer for the healthcare landscape in the state of Rajasthan. The findings from the present study may serve as an impetus to scrutinize the digital processes of CSBY and augment the delivery of this visionary initiative.

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Bima Yojana (CSBY), Exploratory Factor Analysis (EFA), Out of Pocket Expenditure (OOPE), In patient Department (IPD), Electronic Medical Record (EMR), Standard Operating Procedure (SOP)

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