

## Accessing Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (PM-JAY): A case study of three states (Bihar, Haryana and Tamil Nadu)

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## Abstract

*An attempt is made to critically understand the level of awareness and knowledge of the features of PM-JAY amongst the beneficiaries towards their accessing hospital care services under this scheme. A survey of 2700 households using a two stage sampling design, 30 KIIs and observations from Bihar, Haryana and Tamil Nadu were conducted. The major source of awareness is the PM-JAY letter received through mail/ASHA worker; only 9.84% of the beneficiaries in Bihar, and 12.41% of the beneficiaries in Haryana are aware of PM-JAY. Around 59% of the beneficiaries are aware of the scheme in TN. Unmet need, examined in terms of those who could have used the scheme if they were aware, is relatively high in Haryana. It was also observed that IEC activities to increase awareness and knowledge of PM-JAY haven't reached beneficiaries, partly due to supply side constraints. It is recommended that comprehensive IEC activities involving local communities/youth, and PRI institutions, be initiated to increase awareness and knowledge of the scheme, thereby enabling them to effectively utilize services.*

*Keyword: Awareness, knowledge, PM-JAY, India*

## 1. Introduction and Objectives:

The Govt. of India has introduced one of the world's largest government-funded health insurance schemes "the Ayushman Bharat - Pradhan Mantri Jan Aarogya Yojana (PM-JAY) to cover over 10 crore poor and vulnerable families providing coverage up to ₹ 5 lakh per family per year for accessing secondary and tertiary level care. Awareness about health insurance schemes plays a vital role in influencing the coverage and acceptability of the schemes amongst beneficiaries (Basaza et al., 2008, Panda et al., 2016, Bonan et al., 2017, Chemin 2018, Bocoum et al., 2018, Hoerl 2017) which in turn leads to lower effective utilization of health care services and consequently poorer health outcomes among those not aware (Gupta 2017, Jathanna 2018, Rajasekhar et al., 2011, Nandi et al., 2013, Hou and Palacios, 2011, Thakur 2016, Pandve et al. 2013, Reshmi et al. 2007). Several methods, such as sending a personalized letter to the entitled beneficiaries, awareness campaigns at the village level, and extensive use of mass media have been adopted to create awareness among people of the PM-JAY, and to register them. In addition, kiosks have also been established at empaneled hospitals to facilitate on the spot registration to ensure that no one who is entitled to benefit from the PM-JAY is denied hospital care, thereby reducing the risk of exclusion. However, in spite of this, there are significant differences across states in terms of the proportion of potential beneficiaries who are aware of the scheme, its features and benefits.

The study aims to critically understand levels of awareness regarding PM-JAY and its features amongst beneficiaries, and the identification process in place to register them for accessing hospital care services. Further, it makes an attempt to explore and explain the challenges encountered during implementation, and how such challenges could be addressed, which would concomitantly empower beneficiaries and improve the performance of the scheme.

## 2. Objectives & Research Questions

1. To assess levels of awareness of PM-JAY and its various features amongst beneficiaries;
2. To examine various dimensions of the processes of creating awareness, beneficiary identification; and
3. To explore the supply side constraints in the awareness-creation and identification processes of the scheme.

## 3. Methodology and data:

**3.1. Study Design:** To assess the level of awareness and knowledge of various features of PM-JAY amongst potential beneficiaries, the study team reviewed guidelines and procedures in place and used by the NHA/SHAs for generating awareness among beneficiaries. In addition, a cross sectional household survey of approximately 2700 households of target beneficiaries was conducted during June-July 2019. For exploring the supply side constraints in the awareness-creation and registration processes of the programme, we conducted interviews with key officials of the NHA/SHAs and visited kiosks at common service centres (CSC), hospitals and District Collector's offices.

**3.2. Study sites and sampling:** The study was carried out in three states, of which two are green field states namely Bihar and Haryana, and one a brown field state i.e. Tamil Nadu. Bihar and Haryana follow a trust based model, while Tamil Nadu follows a mixed model (trust and insurance model) for implementation of PM-JAY. The selection of these three states was done in consultation with the NHA, taking into consideration the geographic, socio-economic and implementation status of the scheme. Three districts from each state (with relatively good/average and low registration) were chosen to capture possible heterogeneity, and intra-state differentials for better understanding of the scheme. From each district, we selected three blocks, of which two were rural blocks, and one was an urban block. Using a systematic multistage sampling design, around 900 beneficiary households from each sample state (300 HHs from each block), twenty in-depth interviews (KIIs) with key officials involved in the implementation of PM-JAY and around 10 beneficiaries at registration kiosks were interviewed. Only those who were eligible for the PM-JAY as per the Socio-Economic Caste Census (SECC) 2011 database, were considered while selecting the households.

**3.3. Instruments description and data collection:** The questionnaires were translated into the relevant state language (Hindi/Tamil) and administered by a group of trained field investigators appointed from the respective states to collect information on basic household characteristics, demographic profile of the households, level of awareness and knowledge about features and benefits of PM-JAY, and beneficiary identification/registration processes. The questionnaires were shared with the officials of the NHA/SHAs, and pilot tested in all states to check for clarity, consistency and acceptability of the questions to the respondents. Following this, necessary changes were made to reflect the local context and scenarios. *The study was consultative in nature as the research team actively engaged with officials/stakeholders responsible for the implementation of PM-JAY throughout the research process.*

**3.4. Statistical analysis:** The data collected from the survey was analysed using STATA. As the main objective of the study was to assess awareness and knowledge about PM-JAY, responses were coded as “yes”, “no” or “don’t know”. Knowledge level of the beneficiaries was computed by respondents’ total correct responses about the features and benefits of the scheme. Outliers and other inconsistent variables were identified using descriptive statistics, and cross tabulations, and necessary cleaning was done. Knowledge of the benefits of PM-JAY were graded and scored. Responses were categorised into those who knew the correct information and those who did not know or answered incorrectly. Data analysis and calculation of percentages was carried out to estimate the level of awareness, knowledge and understanding of the scheme. Contents of interviews with key informants were shared with respective officials before the analysis was carried out.

Ethical clearance for the study was obtained from a specially constituted committee at the Department of HSS, IIT Madras. The research protocol and the instruments were later presented to the SHAs of the three states for their consent. Oral consent was obtained from the head of the household and all concerns and questions were answered before the questionnaire was administered. Anonymity and confidentiality of the beneficiaries/ interviewees was assured, and maintained. The household questionnaire was administered to the head of household of the entitled beneficiaries of the scheme

The districts selected for the study from the three states and the sample sizes along with the rural-urban distribution of the samples are summarised in Table 1.

**Table 1. Sampling design and sample size for the household survey**

Name of the State	District _01		District _02		District _03		Total	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<b>Bihar</b>	Begusarai		Gaya		Kishanganj			
<b>N=915</b>	196	100	203	97	226	93	625	290
<b>Haryana</b>	Ambala		Sonipat		Faridabad			
<b>N=894</b>	201	97	203	103	189	101	593	301
<b>Tamil Nadu</b>	Cuddalore		Kancheepuram		Salem			
<b>N=904</b>	200	100	203	100	200	101	603	301

#### 4. Results:

**4.1 Awareness of the PM-JAY:** Overall, out of the total 2713 households interviewed, 731 (i.e. around 27% of the beneficiaries) were aware of the PM-JAY as shown in Table 2. The level of awareness, however, varied across the three states. While 59% of eligible households in Tamil Nadu were aware of the scheme, only 9.84% and 12.41%, in Bihar and Haryana, respectively were aware. Awareness in rural areas was lower than urban areas in Bihar and Haryana while the reverse was true in Tamil Nadu (Table 2.a)

**Table 2. State and District-wise awareness of PM-JAY**

Name of the State	No. of HHs surveyed	Beneficiaries Aware of PM-JAY			
		N (%)	N (%)	N (%)	N (%)
		Total	Begusarai	Gaya	Kishanganj
<b>Bihar</b>	915	90 (9.84)	11 (3.72)	58 (19.33)	21 (6.58)
		Total	Ambala	Sonipat	Faridabad
<b>Haryana</b>	894	111 (12.41)	36 (12.08)	29 (9.47)	46 (15.87)
		Total	Cuddalore	Kancheepuram	Salem
<b>Tamil Nadu</b>	904	530 (58.63)	172 (57.33)	133 (43.89)	225 (74.75)
<b>Total</b>	2713	731 (26.94)			

**Table 2a. Awareness about the scheme (Rural-Urban)**

Name of the State	No. of HHs surveyed	Beneficiaries Aware of PM-JAY		
		N (%)	N (%)	N (%)
		<b>Total</b>	<b>Rural</b>	<b>Urban</b>
<b>Bihar</b>	915	90 (9.84)	42 (6.72)	48 (16.55)
<b>Haryana</b>	894	111 (12.41)	60 (10.11)	51 (16.94)
<b>Tamil Nadu</b>	904	530 (58.63)	364 (60.26)	166 (55.33)
<b>Total</b>	2713	731 (26.94)	466 (25.59)	265 (29.70)

The sources of their being made aware are summarised in Table 3. The letter issued by the PMO was the major source of beneficiary awareness in all the three states. 72% of the beneficiaries in Bihar got to know about PM-JAY through the letter, while it was 95% in Tamil Nadu. Those who didn't receive the letter, got to know when they verified their entitlements at kiosks at CSCs or hospitals.

**Commented [SZ1]:** It is not clear why would they verify if they were not aware

**Table 3. Source of awareness of the PM-JAY**

	<b>Bihar N=90</b>	<b>Haryana N=111</b>	<b>Tamil Nadu N=530</b>	<b>Total</b>
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
Received the letters through mail/ASHA worker	72.22	77.48	95.28	89.74
Checked at contact points/kiosks (CSCs/Hospitals)	2.22	13.51	3.58	4.92
Registered during special drive	7.78	4.50	0.19	1.77
Self-checked via mobile or web	3.33	0	0	0.41
Not Answered	12.22	4.50	0.94	2.87
Others (Asha/Friend)	2.22	0	0	0.27
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

#### Verification of their entitlement status:

The verification of entitlement status can be done at the nearest CSCs or at empanelled hospitals (includes both public and private) in Bihar and Haryana. In Tamil Nadu, PM-JAY beneficiaries, who were already enrolled under the existing state scheme, were not required to authenticate their details as this was automatically done. While in Bihar only 45 households out of the 90 who were aware of the scheme verified their entitlement status, in Haryana 107 out of 111 households aware of the scheme verified their entitlement status. The details of the verification of their entitlement are shown in Table 4

**Table 4. % of beneficiaries who verified their entitlement status**

<b>Verified Entitlement status</b>	<b>Bihar N=90 N (%)</b>	<b>Haryana N=111 N (%)</b>	<b>Tamil Nadu* N=530 N (%)</b>
<b>Yes</b>	45 (50.0)	107 (96.4)	NA
<b>No</b>	45 (50.0)	4 (3.6)	NA

\*Automatically merged with existing state scheme

Though PM-JAY is an entitlement based scheme, in order to avail the services beneficiaries are required to complete the identification process and generate an e-card. Of the 731 households who were aware of the PM-JAY, only 524 completed the required identification process to generate their e-card as shown in Table 5. Though overall 71% of those aware of the scheme completed this process to obtain their e card, there were wide variations across the states. Of the 90 beneficiaries

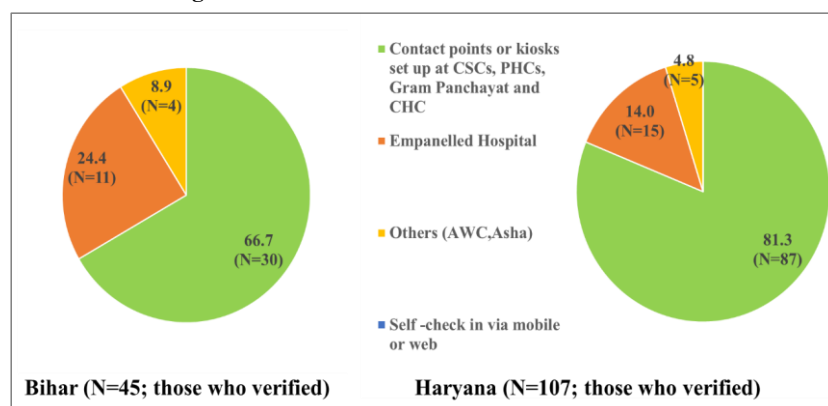
who were aware of the scheme in Bihar, only 14% of the respondents completed the process of identification and obtained their e-cards, even within this there were wide variations across districts. Most beneficiaries in Bihar were under the impression that the letter received was sufficient to get access to health care services if required. However, the scenario was different in Tamil Nadu as it was done automatically for the entitled beneficiaries who were already enrolled with the state scheme. Though beneficiaries of the PM-JAY were automatically merged with the existing state insurance scheme, nearly 18% of the surveyed population was not aware of the identification process and did not have the card for the existing scheme as well.

**Table 5. % of households who completed their identification process**

Name of the State	HH	N (%)	N (%)	N (%)	N (%)
		Total	Begusarai	Gaya	Kishanganj
<b>Bihar</b>	90	13 (14.44)	6 (54.54)	4 (6.9)	3 (14.29)
		Total	Ambala	Sonipat	Faridabad
<b>Haryana</b>	111	73 (65.77)	23 (63.89)	13 (44.83)	37 (80.43)
		Total	Cuddalore	Kancheepuram	Salem
<b>Tamil Nadu</b>	530	438 (82.64)	158 (91.86)	133 (87.96)	163 (72.44)
<b>Total</b>	731	524 (71.6)			

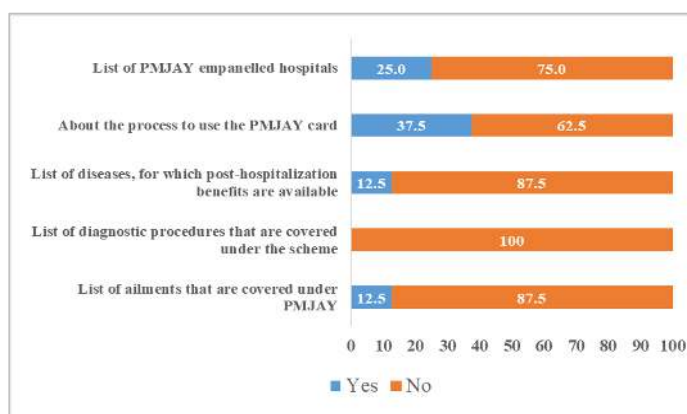
Figure 1 provides details regarding places where beneficiaries verified their entitlement and obtained their e-cards.

**Figure 1. Place of verification of their entitlement**

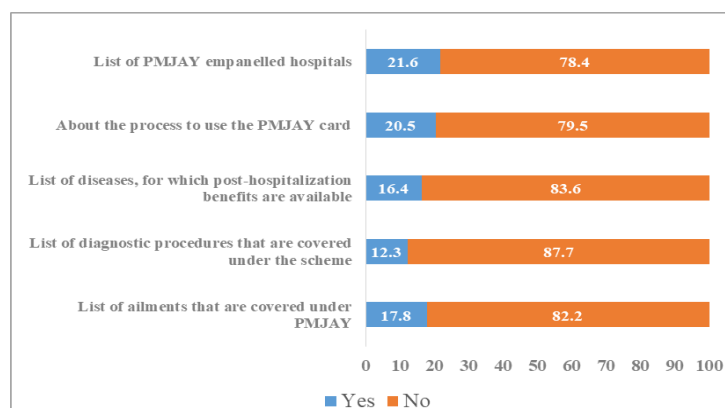


After the generation of e-cards, the guidelines indicate that beneficiaries should be provided a booklet/pamphlet that gives details of the benefits of the scheme, processes of availing benefits, policy period, list of the empanelled network hospitals in the district along with address and contact details, the names and details of the key contact person/persons in the district, toll-free number of the call centre and details of District Nodal Officer (DNO) for any further contact. However the study found that not many beneficiaries were given any information about the features, benefits and processes of availing services. It was found that in Bihar only 37.5% of respondents, who completed the verification, got information about the process of availing the hospitalization services and 25% of them were provided the list of empanelled hospitals. In Haryana, around 20% of the respondents got information about how and where to get the hospital care services under PM-JAY. (refer Figure 2, and 2.a)

**Figure 2. Information provided to beneficiaries about PMJAY-Bihar**



**Figure 2a. Information provided to beneficiaries about PMJAY-Haryana**





Besides providing information at the point of verification of beneficiaries, NHA/SHAs also used various IEC instruments such as Ayushman Bharat flyer; billboards; advertisements in newspapers, TV and Radio jingles and event collaterals such as caps, t-shirts to inform the entitled beneficiaries about features and benefits of the PM-JAY. The major sources of information on PMJAY for the households are reported in the Table 6. PM Arogya (PMAM)/ASHA at the hospitals were a major source of information about the features of PM-JAY in both Bihar and Haryana. In Tamil Nadu however, it was the advertisements on TV/Radio and newspapers and political party cadres/friends/neighbours which were the major sources of information. Out of 530 respondents, 170 reported political party cadres/friends/neighbours as sources of information.

**Table 6. Source of Information about the (Benefits/Coverages) of PM-JAY**

	Bihar N=90	Haryana N=111	Tamil Nadu N=530	Total
PM Arogya Mitra /ASHA/ANM/AWW	56	59	0	115
CHC / District hospital	8	47	5	60
Radio/TV/Newspaper	10	33	103	146
Friend/neighbours/ political party cadres	18	29	170	217
Health staff in Sub-centre / PHC	8	18	1	27
Bill-boards/Posters	0	19	44	63
Websites/Social media	1	11	0	12
Private Hospital/Kiosks	0	2	0	2
Insurance staff	0	0	2	2
Leaflets/brochures	9	0	3	12
Don't Know/Not Answered	13	6	191	210
Others (Postman)	0	0	54	54

#### 4.2. Knowledge about the features and benefits of PM-JAY:

Beneficiaries were asked whether they knew about some of the basic features and benefits of the scheme. The level of knowledge of the scheme was judged from the number of correct responses beneficiaries gave with respect to specific features and benefits. Approximately, 41% of the households knew that PM-JAY was cashless and that they didn't have to pay any co-payment during hospitalization. 37% of them knew that hospital services could be accessed if required even if one had not yet completed the verification process and obtained the e-card. Beneficiaries in Bihar and Haryana were highly ill informed as more than 70% of respondents responded that they would not be allowed to access the required health care without the e-card. It was also reported that most beneficiaries were not aware of the list of ailments/diagnostics covered and where to get services. A majority of the beneficiaries, however, knew the maximum amount of coverage they were entitled to and the policy regarding coverage of all family members. (refer Table 7).

**Table 7. % of beneficiaries who answered correctly specific features of PM-JAY**

	Bihar N=90	Haryana N=111	Tamil Nadu N=530	Total
	%	%	%	%
Addition of new family members	47.8	36.4	67.9	60.6
Treatment without the e-card	18.9	16.4	44.3	36.9
Age Limit for dependents	30.0	33.6	43.4	40.2
Card Portability	63.3	37.9	41.9	43.9
Co-Payment during hospitalization	31.1	45.0	43.8	42.4
Coverage Amount	74.4	95.0	53.2	62.1
Coverage Period (in years)	35.6	45.0	18.3	24.5
Diagnostics covered	57.8	54.3	25.1	33.5
Grievance Mechanism	45.6	30.7	11.5	18.6
Knowledge of empanelled providers	20.0	67.9	48.1	47.6
No. of Beneficiary per family	77.8	71.4	48.9	55.8
Post- discharge Benefits	0.0	2.9	3.2	2.7
Transportation Exp.	18.9	30.0	59.1	49.8
Treatment Package	60.0	56.4	49.4	51.7

The empowerment of entitled beneficiaries and hence the success of PM-JAY significantly depends on the extent to which beneficiaries are availing hospitalization services when needed. The percentage of beneficiaries who are aware of the scheme and used the hospitalization services under the PM-JAY is summarised in Table 8. It was observed that a total 108 households reported the need for hospitalization while only 33 (around 30% of these) actually availed of these services offered under PM-JAY. Unmet health need was measured based on the response to the question “whether the beneficiaries used or received hospital care services during the past six months under the PM-JAY”. Those who responded that they didn’t access services offered under the scheme even though needed were categorized as having an “unmet need”. In Haryana, out of the 111 respondents, approximately 20% said that they did not avail the services offered under PM-JAY even though they needed hospitalization and were aware of the scheme and had to thus incur high out of pocket expenditure for seeking treatment elsewhere.(refer Table 8).

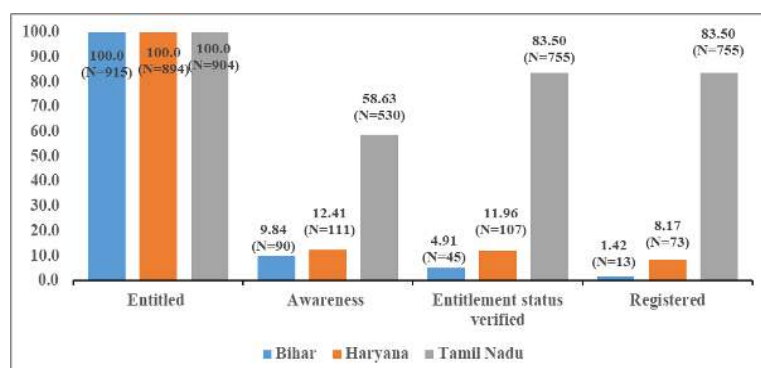
**Table 8. % of beneficiaries aware of the scheme and received hospital services under PM-JAY**

	Bihar N (%)	Haryana N (%)	Tamil Nadu N (%)	Total N (%)
Yes	4 (4.44)	15 (13.51)	14 (2.64)	33 (4.51)
No, though required (Unmet Needs)	5 (5.56)	23 (20.72)	47 (8.86)	75 (10.25)
No, did not require the services	81 (90.0)	73 (65.76)	469 (88.49)	623 (85.22)
Total	90 (100)	111 (100)	530 (100)	731 (100)

Those respondents who reported that they didn't use the services though they were aware of PMJAY and needed hospitalization services were further questioned to know the reasons for not availing these. Seventy one out of 75 of the respondents (Approximately 95%) reported that they lacked knowledge about where and how to use the scheme. Very few people, a total of less than 5% of respondents, reported quality of care as the reason for not availing hospitalization services under the scheme.

The level of awareness and knowledge of the scheme in the three states is summarized in Figure 3. Overall, as is evident from Figure 3, a very low proportion (less than 1.5% in Bihar and 8.17% in Haryana) of those entitled to the scheme have so far registered in Bihar and Haryana, while it was considerably higher (close to 84%) in Tamil Nadu.

**Figure 3. % of HH Aware-Status verified-Registration completed: State wise**



#### 4.3. Findings from qualitative interviews and field-observations:

Though the NHA and SHAs used various instruments such as Ayushman Bharat flyer; advertisements (hoardings & newspaper ads, audio and video and event collaterals to generate awareness and knowledge about the scheme, the reach and penetration of information regarding PM-JAY was still very low in Bihar and Haryana. Interactions with key officials and observations from field visits, provided further insights into the major constraints yet to be overcome in the process of generating awareness and knowledge about PM-JAY. These are highlighted below:

- ***Inadequate human resources with requisite skill-sets to implement the scheme at the state level.***

As one senior official put it: “awareness creation process for a large national flagship programme such as PM-JAY requires enormous manpower and IEC capacity, particularly in

*the initial phase of implementation of the programme...” He further added, “but given the workload of the Chief (District) Medical Officer, and absence of specific IEC wing in the district, it is going to be an extremely arduous task to fulfill...”.*

In almost every district that was examined (in Bihar and Haryana in particular), nodal officers felt overwhelmed with the workload and the range of activities that they needed to attend to. Some of them functioned as nodal officers for more than 3 different schemes.

- ***Lack of time and manpower to distribute the PM letters and other IEC materials.***

*In most districts, officials referred to the “strenuous efforts they had to make to ensure that beneficiaries received the letters before the Election Code commenced (from 11 April 2019)”. This put enormous stress on the implementation team, as an official put it, “leaving no time for us to carry out effective roll out of this scheme”.*

The letters, which were the major source of information, were not distributed to the beneficiaries by the designated personnel (eg., ASHA workers) due to lack of sufficient workforce. In many places, letters were distributed by the village heads, who in turn collected Rs. 20-30 from beneficiaries. They rarely provided any additional information about the scheme and why these letters were distributed.

- ***Lack of Infrastructure (Temporary Office Space)***

In every district, it was noted that the PM-JAY office functioned from the district government hospital complex. While the basic amenities are therefore available, in many instances the office space looked cramped, given the furniture, computers, etc., required for running the office.

- ***Insufficient information***

Detailed information about the scheme/package was not shared by the kiosks; as some of the beneficiaries we met lamented:

*“while we got the Insurance card, we do not have any information on the names/list of empaneled hospitals in the state.” reported by several beneficiaries.*

*an official from TN expressed, “TNHSP and UIIC were closely involved in the planning of IEC activities, designing the content and ensuring distribution of the materials”. It requires enormous effort and it requires much time to create the level of awareness that will instill confidence among the people to access services offered by this scheme”.*

- *Long waiting time at kiosk for completing the identification*

Beneficiaries had to spend long hours at the CSCs for completing the identification process and wait for weeks to get their e-cards. Besides, we also observed that beneficiaries were price sensitive and were not willing to pay even Rs. 30/- per ID card. (this was clear from the number of cards generated that remained uncollected from CSCs)

### 5. Discussion:

The study investigated the level of awareness and knowledge of PMJAY amongst the entitled beneficiaries of Bihar, Haryana and Tamil Nadu. Though health insurance is not a new concept as some of them were beneficiaries of the erstwhile RSBY/state specific schemes, the level of awareness and knowledge of PMJAY is not yet not high particularly in Bihar and Haryana.

The study also shed light on the unmet needs of beneficiaries of the scheme in these three states by investigating the reasons for not using the PMJAY when needed. Our findings indicate that the lack of awareness and knowledge about the scheme were important factors in explaining such a trend. Beneficiaries' knowledge of the Grievance Cell is low, including in TN which has had a much longer experience than the other two states with such a large insurance scheme. It is important to address this issue, particularly in the early years of the scheme, as otherwise the level of patient-satisfaction with the scheme may remain low. A detailed analysis of the reasons for the low awareness of the grievance redressal mechanism and a survey of beneficiaries who have accessed the services, on Out of Pocket Expenses (OOPEs) will help strengthen the implementation process. Another area of concern is the low level of awareness of regarding the duration of the insurance coverage.

These apart, the fact remains that the overall workload of the current IEC staff appears far more than they can effectively handle. Careful planning of human resources and the development and implementation of skill development protocols along with other supply side support should be given high importance in the near future.

Our findings should be interpreted in the light of some limitations. One major limitation of this study is that the survey was conducted almost six months after the distribution of the letters. The election process (April-May 2019), significantly disrupted official efforts to organize and conduct IEC activities, particularly in Bihar and Haryana.

### 6. Recommendations and Conclusions:

The study showed that the level of awareness of the PMJAY scheme was relatively low in Bihar and Haryana in the inception/initial phase of the scheme, while awareness was high in Tamil Nadu where PM-JAY was integrated with the existing state scheme. Based on the survey findings, observations from the field, and discussions with key officials regarding experience gained particularly from Tamil Nadu, we provide below some recommendations, for awareness creation, enhancing the identification process, and to overcome supply side constraints;

#### **Awareness:**

- Set up stalls in various trade-fairs, organize (mega) camps periodically, arrange special outreach programmes in inaccessible regions; also, mandate all empaneled hospitals to conduct periodic camps in respective areas;
- Conduct more IEC activities involving local communities/youths (like Saksyam Yuva scheme in Haryana)(e.g. Nukkad Play) and local PRIs, local political party cadres (as ;
- Better use social media (FB/WhatsApp)

#### **Identification:**

- Involve the village/ward representatives (such as PRI members)
- Put in place mechanisms for automatic registration using the latest database (Aadhar/Ration Card)
- Ensure that identification/registration can be carried out at zero price to beneficiaries;
- Distribute tool kits/information brochures (package, entitlements, empaneled hospitals) to CSCs kiosks

#### **Overcoming supply side constraints:**

- Put in place a designated Cell with the requisite skill set for carrying out IEC activities
- Hire a professional agency to make the IEC materials in regional languages;

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