

CHAPTER-7
EVALUATING EFFICIENCY
OF THE HOSPITALS

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7. Evaluation of in-patient services through Outcome Indicators

Patient services provided in IPD were evaluated through certain outcome indicators (OIs) like Bed Occupancy Rate (BOR), Bed Turn Over Rate (BTR), Average Length of Stay (ALOS), Leave Against Medical Advise (LAMA), Referral Out Rate (ROR) etc. **Table 7.1** gives the categorisation and methodology of evaluating these OIs:

Table 7.1: Calculation of quality indicators

Type	Quality Indicator	Numerator	Denominator
Productivity of hospital	BOR (in <i>per cent</i>)	Total patient bed days X 100	Total no. of functional beds X No. of days in a month
Clinical care capability of hospital	ALOS (in days)	Total patient bed days	Discharges in the year (including death, LAMA, referred)
Service quality of hospital	LAMA (Rate/1000)	Total no. of LAMA X 1000	Total no. of admissions
	Absconding Rate (Rate/1000)	Total no. of Absconding cases X 1000	Total no. of admissions
Efficiency	BTR	Total discharge (including death)	Total no. of functional beds
	ROR (in <i>per cent</i>)	Total no. of cases referred to higher facility	Total no. of admissions

7.1 Bed Occupancy Rate

Bed Occupancy Rate (BOR) is used to examine how effectively hospital's inpatient capacity is being utilized for inpatient care. As per IPHS norms, the BOR of hospitals should be at least 80 *per cent*. BOR of the test checked DHs is given in **Table 7.2**.

Table 7.2: BOR of the test checked DHs (in *per cent*)

Year	DH Kohima	DH Phek	DH Tuensang	DH Wokha
2014-15	Not furnished	Not furnished	55.50	25.89
2015-16	Not furnished	Not furnished	21.74	44.89
2016-17	Not furnished	Not furnished	30.96	42.63
2017-18	Not furnished	61	31.00	48.22
2018-19	59	47	39.20	63.78

Source: Departmental figure

Benchmark: 80 per cent

While DH Kohima and Phek did not furnish BOR for three to four years, in none of the DH, it was 80 *per cent*. It was on a decreasing trend in two DHs (Phek & Tuensang – as compared to 2014-15), while the BOR improved in DH Wokha. The deficiencies in services and non-availability of comprehensive services in test check DHs as mentioned in this Report, gets reflected in the poor BOR. Test checked PHC and CHC did not furnish their BOR.

7.2 Average Length of Stay

Average Length of Stay (ALoS) is an indicator of clinical care capability and to determine effectiveness of interventions. ALoS is the time between the admission and discharge/death of the patient and expressed in number of days. As per IPHS norms ALoS in a DH is five days. ALoS in respect of test checked DHs were as shown in **Table 7.3**.

Table 7.3: ALoS in respect of test checked DHs

Year	DH Kohima	DH Phek	DH Tuensang	DH Wokha
2014-15	Not furnished	Not furnished	7.5	Not furnished
2015-16	Not furnished	Not furnished	3.5	Not furnished
2016-17	Not furnished	Not furnished	4.5	Not furnished
2017-18	Not furnished	3	4.5	2.4
2018-19	5.63	3	5.0	3.0

Source: Departmental figures

All the test checked DHs did not furnish information on ALoS uniformly across the years. However, in the year 2018-19, ALoS was minimum in DH Phek & DH Wokha and highest in DH Kohima. Test checked PHC and CHC did not furnish ALoS.

Department replied (October 2020) that instruction would be issued to all districts for calculation and yearly review of out-come indicators.

7.3 LAMA cases in DHs

To measure service quality of a hospital, Leave Against Medical Advice (LAMA) rate & Absconding Rate are evaluated. LAMA is the term used for a patient who leaves the hospital against the advice of the doctor and Absconding Rate refers to patients who leave the hospital without informing the hospital authorities. Scarce data is available on various aspects of the problem like type of cases, reasons where patients leave etc. LAMA cases in test checked districts is given in **Table 7.4**.

Table 7.4: LAMA¹ cases in test checked districts

Year	DH Kohima			DH Phek			DH Tuensang			DH Wokha		
	IPD admission	LAMA case	LAMA rate	IPD admission	LAMA case	LAMA rate	IPD admission	LAMA case	LAMA rate	IPD admission	LAMA case	LAMA rate
2014-15	7757	26	3.35	1107	0	0.00	2704	0	0.00	2682	3	1.12
2015-16	8020	0	0.00	1145	1	0.87	2359	0	0.00	1804	4	2.22
2016-17	7993	9	1.13	2504	0	0.00	2512	0	0.00	1941	5	2.58
2017-18	8220	33	4.01	5540	1	0.18	2515	0	0.00	1789	3	1.68
2018-19	7842	26	3.32	4279	1	0.23	2863	2	0.70	1689	4	2.37
Total	39832	94	2.36	14575	3	0.21	12953	2	0.15	9905	19	1.92

Source: HMIS data, Departmental records

There were 94 cases of LAMA in DH Kohima followed by 19 cases in DH Wokha during 2014-19. LAMA cases were not reported from CHC Viswema and PHC Botsa.

Test check history sheet of LAMA cases revealed that neither written consent of the patient nor the follow-up action to be taken were noted in the discharge slip.

7.4 Patient Satisfaction survey

There was no established system to carry out patient satisfaction survey in test checked DHs.

In DH Wokha, during 2017-18, patient satisfaction survey was carried out and 31 number of responses were received. Majority of patients rated the performance of the DH Wokha as very good. However, five patients rated the cleanness of the hospital as poor. This issue of neatness is now addressed by comprehensive renovation of DH Wokha.

Audit carried out patient satisfaction survey of 82 patients (36 IPD patients and 46 OPD patients) in four test checked DHs.

Patient satisfaction survey of important out comes across test checked DHs revealed that:

- Registration process in all the test checked DHs were hassle free as it took 5.7 minutes only for registration.
- Average waiting time between registration and consultation with the doctor was 23 minutes.
- Provision for drinking water for patients was poor as only 13.4 *per cent* respondents replied that drinking water was available in DHs.


¹ LAMA figures taken from Departmental records as it did not appear in HMIS for the year 2014-15 to 2016-17.

- Wash room facilities were scarce, as only 42.7 *per cent* patients responded that facility was available.
- Signage was available for guidance at hospitals as 78 *per cent* responded it was available and 19.6 *per cent* responded it was available partially while 2.4 *per cent* responded it was not available.
- 86.6 *per cent* responded that Rate list for different diagnostic services were not displayed in the reception area.
- On explanation by doctors on ailment, cost, course and duration of treatment, 29.3 *per cent* responded positively, 22 *per cent* negatively and 48.8 *per cent* responded that doctors use to explain about ailment, duration, cost etc.
- On availability of prescribed medicines/drugs, 23.2 *per cent* responded it was always available, 24.4 *per cent* responded it was available most times, 25.6 *per cent* responded few times and 26.8 *per cent* responded it was almost never available.
- On availability of lifts, wheel chairs, stretchers, ramps etc. for specially abled, 58.5 *per cent* responded that they were not aware about such services.
- Overall rating of hospital experience was “Good” as 63.4 *per cent* responded positively.

7.5 Recommendation


- (i) *The State Government needs to adopt an integrated approach, allocate resources in ways which are consistent with patient priorities and needs to improve the monitoring and functioning of the DHs.*
- (ii) *The monitoring mechanism should be revamped by including measurement of outcome indicators pertaining to productivity, efficiency, service quality and clinical care capability of the hospitals.*

Kohima
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The 25 June 2021


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