Chapter - 7 Evaluation of In-Patient Services through Outcome Indicators

This chapter presents an assessment of the IPD services provided during 2014-19 in the test-checked DHs based on certain Outcome Indicators (OIs) prescribed in IPHS guidelines, *viz*., Bed Occupancy Rate (BOR), Leave Against Medical Advice (LAMA) Rate, Absconding Rate and Referral Out Rate (ROR).

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 *per cent*)	Total patient bed days X 100	Total no. of functional beds X No. of days in a month
Service quality of hospital	LAMA (Rate/1000)	Total no. of LAMA X 1000	Total no. of admissions
	Absconding (Rate/1000)	Total no. of Absconding cases X 1000	Total no. of admissions
Efficiency	ROR (in *per cent*)	Total no. of cases referred to higher facility	Total no. of admissions

Source: IPHS.

7.1 Bed Occupancy Rate

The Bed Occupancy Rate (BOR) is the average occupancy of hospital beds within a given year. It is an indicator of the productivity of the hospital services and is a measure of verifying whether the available infrastructure and processes are adequate for delivery of health services. As per IPHS, the BOR of hospitals should be at least 80 *per cent*. The BOR of the test-check DHs during 2014-19 is given below:

Table 7.2: BOR of the test-checked DHs

Sl. No.	Hospital	BOR (%)
1	Shillong CH	64
2	Nongpoh CH	41
3	Jowai CH	**82**
4	Tura MCH	66

Source: Records of test-checked DHs. *Benchmark: 80%*

Thus, the BOR of Jowai CH with 82 *per cent* was slightly higher than the IPHS benchmark (80 *per cent*). The low BOR of the three test-checked DHs *viz.* (i) Shillong CH (64 *per cent*), (ii) Nongpoh CH (41 *per cent*) and (iii) Tura MCH (66 *per cent*) indicates that the utilisation of beds at these hospitals is low.

However, the BOR also indicates a higher turnover of patients due to the nature of the services being provided by respective DHs. *e.g.* Shillong CH has specialised centres for oncology and dialysis where patients may take a longer time to recover than normal patients and therefore may occupy the beds for comparatively longer periods. Meanwhile, low BOR at Nongpoh CH is attributable to non-availability of IPD services and consequential referrals as discussed in **paragraph 4.2.1**.

7.2 Referred out Rate

As per IPHS norms, referral services to higher centres denote that the facilities for treatments were not available in the hospitals. Table 7.3 gives the Referred Out Rate (ROR)[36] in the four test-checked hospitals during 2014-19:

Table 7.3: ROR of the test-checked DHs

Sl. No.	Hospital	ROR (of 1000)
1	Shillong CH	17
2	Nongpoh CH	**166**
3	Jowai CH	31
4	Tura MCH	16

Source: Records of test-checked DHs. weighted average: 43.

Thus, the Nongpoh CH with ROR of 166 out of 1000 patients was the highest of all the test-checked DHs, indicating that health care facilities were not adequate in this hospital. This has been brought out by audit also in preceding chapters.

7.3 Leave Against Medical Advice and Absconding Rate in DHs

Leaving the hospital against the physician's advice is known as Leave Against Medical Advice (LAMA) and Absconding refers to patients who leave the hospital without informing the hospital authorities. Patients who leave the hospital without physician permission before completing course of treatment may cause harm to themselves and others as it may expose the patient to risk of an inadequately treated medical problem and result in the need for readmission. We evaluated LAMA Rate (per 1000) and

[36] ROR= (No. of Refer out x 1000) ÷ No. of New admission.

Absconding (Abs) rate per 1000 in the test-checked DHs during 2014-19 which is given in the following table:

Table 7.4: LAMA and Abs. rate of the test-checked DHs

Sl. No.	DH	LAMA rate (of 1000)	Absconding Rate (of 1000)
1	Shillong CH	**31**	**20**
2	Nongpoh CH	14	1
3	Jowai CH	**27**	2
4	Tura MCH	18	3

Source: Records of test-checked DHs. *Weighted average for LAMA: 26 and Absconding: 9.*

In Shillong CH, both LAMA & Abs rate was very high and in Jowai the LAMA rate was also high. This indicated that the hospital authorities need to impress upon the patients to avail of complete medical treatment and then get discharged.

7.4 Patient Satisfaction Score

Patient satisfaction score (PSS) is an indicator of patient satisfaction and acts as an important monitoring and feedback mechanism for the IPD. Patient satisfaction survey was not conducted by Shillong CH, Nongpoh CH and Jowai CH during the period 2014-19. Although, Tura MCH stated to have conducted, but relevant records like the survey report, recommendations (if any) and follow up action taken, were not furnished to Audit. Thus, while three DHs which did not conduct any Survey missed out on an opportunity for identifying gaps based on feedback by patients and developing an effective action plan for quality improvement in the hospitals, Tura MCH despite conducting PSS did not prepare action points based on the survey results.

To gauge the satisfaction level of patients, Audit conducted a Patient Satisfaction Survey, based on a pre-defined questionnaire. Results of the Survey has been included at appropriate places.

7.5 Outcomes *vis-à-vis* Availability of Resources

Table 7.5 shows the relative performance of the test-checked DHs on various outcome indicators worked out by audit and the corresponding availability of resources:

Table 7.5: Outcomes *vis-à-vis* availability of resources in District Hospitals

Hospital	Outcome Indicators				Availability of resources (per cent)		
	BOR (%)	ROR per 1000	LAMA per 1000	Abs. Rate per 1000	Doctors	Nurses	Essential drugs
Shillong CH	64	17	31	20	91	79	37
Nongpoh CH	41	166	14	1	71	87	37
Jowai CH	82	31	27	2	78	76	23
Tura MCH	66	16	18	3	86	63	33
Benchmark[37]	*80-100%*	*43*	*26*	*9*	*100%*	*100%*	*100%*

Source: Records of test-checked DH.

As seen from the Table above, against selected outcome indicators, the performance of Shillong CH and Nongpoh CH, in particular, were below par. Nongpoh CH had low bed occupancy and an alarmingly high referral out rate of 166 *per 1000*, indicating that this hospital had struggled to provide quality services.

The LAMA & Absconding Rate was high in Shillong CH at 31 and 20 *per 1000* respectively.

Recommendations

i. *The 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 district hospitals towards facilitating a significant change in health outcomes.*

[37] Benchmarks: BOR – as per IPHS, Weighted average for rest of the outcome indicators, 100 *per cent* (sanctioned strength) for availability of doctors, IPHS norms for nurses and for essential drugs, it was based on stock position (on the date of JPV) against 60 drugs common to both in the SEDL and drugs list of NHM Assessor's Guidebook.

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. The high LAMA and Absconding rates in test-checked DHs may also be addressed by improving counselling services.

(SHEFALI S. ANDALEEB)
Accountant General (Audit), Meghalaya

Shillong
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Countersigned

(GIRISH CHANDRA MURMU)
Comptroller and Auditor General of India

New Delhi
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