

Hinduja Healthcare Management Series

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**National Accreditation Board for Hospitals
and Healthcare Providers**



Reducing Average Length Of Stay

is regarded as an indicator of the efficiency of hospitals.

Average length of stay (ALOS) is used in assessment of quality of care, costs and efficiency.

- Patient safety is a subset of health care quality
- The avoidance or prevention of adverse outcomes or injuries stemming from the processes of health care.



Reducing Average Length Of Stay is good for

- ✓ patient,
- ✓ care team (reduced chances of errors),
- ✓ for management (increase turn over),
- ✓ for Insurance, for community (National Economy)
- ✓ Special role where beds are in demand . Bed shortage.
Eg. Dengue in Delhi



“Define Average Length of Stay !”

“Hospitals should be evaluated simultaneously on two sets of measures, quality and resource utilization, which together we define as efficiency.”

ALOS has decreased over the last few years. This is due to the high presence of health insurance, technology and advancement in medical science.

Co-morbidities eg. CHF, Pneumonia and Diabetes cause variations in ALOS.

It is important to estimate – with data – an appropriate length of stay and anticipating costs prior to the patient’s admission.

Being successful within health care reform requires a solid “data house” to continuously monitor, improve and report on outcomes like ALOS.

Average length of stay (ALOS)

- Average length of stay (ALOS) refers to the average number of days that patients spend in hospital. It is generally measured by dividing the total number of days stayed by all inpatients during a year by the number of admissions or discharges. Day cases are excluded.
- In the calculation of ALOS, days and discharges of healthy babies born in hospitals are excluded in several countries (*e.g.* Australia, Austria, Canada, Chile, Estonia, Finland, Greece, Ireland, Israel, Japan, Korea, Luxembourg, Mexico, Spain, Sweden, Turkey). Including healthy newborns would reduce the ALOS in these countries (*e.g.* by 0.6 day in Canada).
- Ref - Information on <http://dx.doi.org/10.1787/888932315602>.

ALOS/BOR/BTR

- The three performance indicator ratios commonly used in assessing the relative performance of hospitals including:
 1. Average length of stay (ALOS)
 2. Bed occupancy rate (BOR)
 3. Bed turnover ratio (BTR)

ALOS/BOR/BTR

- **Average length of stay (ALOS):** This measure refers to the average number of days that a patient stays in a hospital. It is calculated using the following formula:
$$\text{ALOS} = \frac{\text{Inpatient days}}{\text{Admissions}}$$
- **Bed occupancy rate (BOR):** The occupancy rate is a measure of utilization of the available bed capacity. It indicates the percentage of beds occupied by patients in a defined period of time, usually a year. It is computed using the following formula:
$$\text{BOR} = \frac{\text{Inpatient days}}{\text{Bed days}} \times 100$$

Where, Inpatient days = admissions \times ALS, and bed days in the year = number of beds \times 365
- **Bed turnover ratio (BTR):** The turnover ratio is a measure of productivity of hospital beds and represents the number of patients treated per bed in a defined period of time (usually a year). It is computed as follows:
$$\text{BTR} = \frac{\text{Total patient admissions}}{\text{Number of beds}}$$

Reducing Length of Stay: Why are we trying to reduce length of stay?

What determines length of stay? Evaluation of the costs and benefits of reducing time in hospital are the objectives that govern the change

* Does length of stay make a difference to patients' health outcomes? * Do reductions in length of stay really save money? * Should we be trying to reduce length of stay?

- Causes of variation in length of stay:---
- **Supply factors:** Hospital bed occupancy rate, Discharge procedures, level of illness at which hospital care is considered desirable, Quality and availability of post discharge home care, appropriate equipment and staff resources and method of payment.
- **Demand factors:** Socioeconomic status, Disease severity, Co-morbidity, Satisfaction of patients and their relatives

Ref - <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1055402/pdf/qualhc00021-0046.pdf>

Reducing Length of Stay: Reduce it to what?

Using clinical integration to determine reduce length of stay

This has to be decided by leadership.

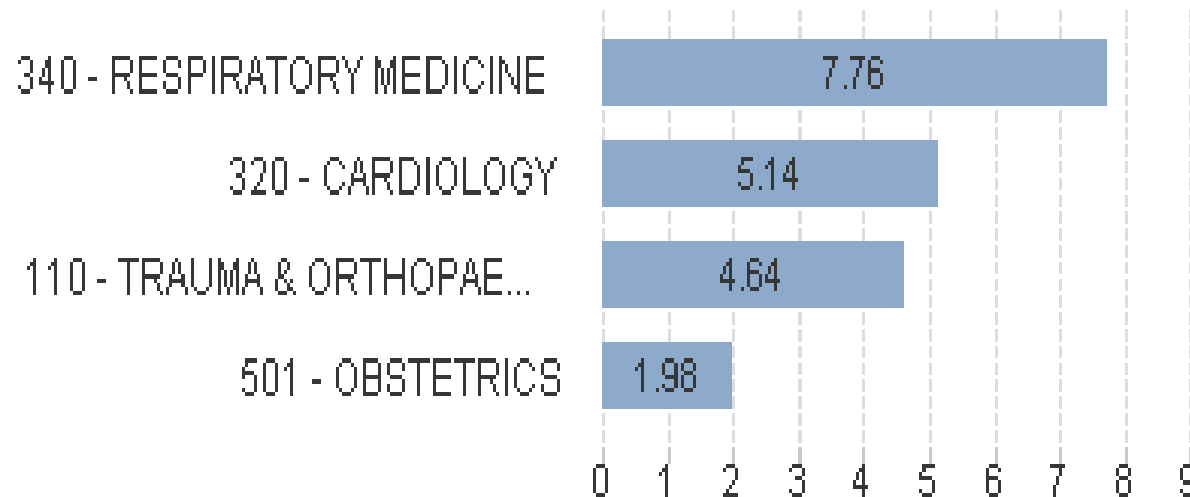
- Reducing ALOS has been a constant battle for providers everywhere. The financial ramifications from insurance coverage and an operational cash flow standpoint have made it a priority
- One should have a clear vision of the patient's needs first, and then work backwards to the organization and its stakeholders i.e care team, payer etc
- **Clinical Systems Integration is important.** consolidate various administrative processes such as discharge planning and utilization management

- Length of Stay is a vastly important metric in health care . Compare the average length of stay within one organization between time periods or comparing the average length of stay between specialties.

AOL is a vastly important metric in health care

Ref US Health care Group -- <https://community.qlik.com/groups/us-healthcare-user-group/blog/2015/03/15/visualizing-length-of-stay>

- ### Average LOS in Days by Specialty



6 ways hospitals can reduce length of stays

"Capacity optimization is everyone's responsibility,"

1. **Emphasize accurate patient placement following the 5 Rs:** Place the patient in the appropriate sector of care using five guidelines--**r**ight level of care, **r**ight service, **r**ight nursing unit, **r**ight bed and **r**ight time period.
2. **Initiate daily multidisciplinary rounding and daily bed huddles:** Track patient progress daily so you can complete ancillary tasks on time, such as patient education, payer authorizations, Dietician, physiotherapist consultation etc if required for post discharge period, if transport is required to go back home.
3. **Discharge process:** The entire healthcare team should help patients reach discharge as quickly as is clinically feasible.

6 ways hospitals can reduce length of stays

- 4. Review patient census:** Manage elective admissions to stabilize peaks in the patient census and balance them out with the emergency department admissions
- 5. Communicate with staff and patients:** Streamlining communications between patients and hospital staff play a huge role in ensuring that discharge progress as quickly as possible.
- 6. Measure and distribute the correct metrics:** Know the average daily admissions, both scheduled and unplanned, in order to appropriately manage capacity

<http://www.fiercehealthcare.com/story/6-ways-hospitals-can-reduce-length-stays/2013-12-10>

Operational issues in reducing ALOS

Diagnosis:

- Map the process, identify bottlenecks and the main causes of delay
- Map the information flows and responsibility for direct patient care at all points in the patient journey
- Measure and analyse current patterns of discharge by day of week, hour of day, speciality etc.
- Analyse all inpatient stays by LoS to identify where improvements in the discharge process will have the greatest impact. The 80:20 rule will help here, (80 per cent of patients have a much shorter LoS than the remaining 20 per cent, therefore there is more to gain from addressing the 20 per cent.

Operational issues in reducing ALOS

Problem solving:

- Use predictive discharge methods to reduce variation
- Attempt to smooth demand from clinicians across the week (the demand for critical beds)
- Set a planned date for discharge on the day of admission or at pre-admission, if possible, using protocols / pathways for common conditions
- Involve patients and their families in discharge planning so that they are prepared and can make their own arrangements
- Use visual triggers, e.g. visible expected date of discharge

Operational issues in reducing ALOS

Orchestrating discharge:

- Establish regular discharge making ward rounds at least once a day
- Consider nurse-led discharge
- Identify the lead-in times required, e.g. test and test result availability, medicines, transport etc. Ensure that they don't hold up discharge
- Plan around the lead-in times
- Match the time of discharge with the time beds are required

How Long Is Too Long?

- The average length of stay was highest in Japan, followed by Korea. The OECD average was about 7 days . Several factors can explain these cross-country differences. The abundant supply of beds and the structure of hospital payments in Japan provide hospitals with incentives to keep patients longer. Financial incentives inherent in hospital payment methods can also influence length of stay in other countries.
- Length of stay is commonly used as a quality metric. The prospective payment system in U.S. Medicare for reimbursing hospital care promotes shorter length of stay by paying the same amount for procedures, regardless of days spent in the hospital.
- Ref http://www.oecd-ilibrary.org/sites/health_glance-2011-en/04/05/index.html;jsessionid=1ev7ekiadm18.x-oecd-live-02?itemId=/content/chapter/health_glance-2011-33-en&csp=7437a3773df7eb771d0f1145cc7940bf

Thank You

