Prolonged Stay of Admitted Paediatric Cases in Rims Ranchi and Factors Responsible and Remedy

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Abstract:
Background: Average length of stay(ALS) is used to assess efficiency, hospital resource utilisation and quality of care. Hospital utilisation statistics play an important role in managerial operation and one of the main indicators is length of stay.
Objective: To determining the factors responsible for the prolonged hospital stay and to find out remedies to reduce prolonged hospital stay.
Methodology: This study was a hospital based prospective cross sectional study conducted from April 2018 to September 2018 in Department of Paediatrics and Neonatology, Rajendra Institute of Medical Sciences, Ranchi. In this study, 357 patients are categorised 3 groups and causes for their length of stay is studied.
Results: Out of 357patients 173 are neonates and 184 are of paediatric age group.
of these patients 138 patients stayed for 7-10 days in hospital(Group A), 147 patients stayed for 10-14 days (Group B) and 72 patients were admitted in hospital for more than 14 days (Group C).
Completion of the course of treatment of common illness and delayed investigation of common illness associated with less length of stay, complication during treatment and misdiagnosis associated with moderately prolonged length of stay and severe illness like encephalitis, chronic kidney disease , hepatic encephalopathy, birth asphyxia, meningitis, extremely low birth weight are associated with prolonged length of stay in the hospital.
Conclusion: This study demonstrate that chronic and severe episodes of diseases have considerably longer length of stay where as communities with a high proportion of infectious diseases tend to have a shorter ALS.
Keywords: ALS.

I. Introduction

Hospital utilisation statistics play an important role in managerial operation and one of the main indicators is length of stay. Length of stay is the interval between date of admission and date of discharge. Average length of stay (ALS) is used to assess efficiency, hospital resource utilisation and quality of care. Appropriate hospital stay which is considered well organised, and customized to patient's actual needs helps to improve hospital efficiency, this also reduces waiting period of patients, and not only reduces waiting list but also satisfies financial constraints without compromising the quality of care. It is important to administrator and clinicians to reduce the inappropriate hospital stay for patients.

An inappropriate hospitalization day recognised as an important indication of misuse of healthcare services and indicates inefficient utilisation of hospital resources. Reducing the time spent in hospital reduces the cost per patient and allows more patients to be treated in given period. Moreover, a shorter stay in hospital allows treatment to be shifted from expensive inpatient care to less expensive outpatient care. In a 150 bedded hospital, reducing ALS from 15 to 10 days helps to serve 2000 additional patient in a year. Ward wise, unit wise, disease wise, doctor wise and speciality wise studies of ALS are more useful than overall ALS for the hospital. The average length of stay which is an important indicator of hospital efficiency, depends on a number of factors.

The primary factors determining ALS depends on case mix, case severity and the current treatment practices determined by physicians and technology available in medical diagnostics procedures. For the example, chronic and severe episodes of diseases have considerably longer length of stay where as communities with a high proportion of infectious diseases tend to have a shorter ALS. Primary factors affecting length of stay

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cannot be controlled by hospital. Investigations or diagnostic procedures are secondary factor which affects average length of stay. Healthcare environment which is important for recovery during hospitalization care.

Institutional structure for taking care of certain chronic illnesses where continuous care is not required but length of stay will be more. If the average length of stay is more, due to secondary factors, it shows improper or inefficient use of hospital resources and it is indication of inefficiency. Among the secondary factors influencing the average length of stay above mentioned, scheduling of special procedure in the hospital and physician behaviour are two procedures. The prolonged stay of patient in any hospital as always pose extra burden on the hospital, so the following study carried out to know the exact cause of prolonged stay in paediatrics and neonatology department rims Ranchi and to find out any factor leading to this stay and how to overcome it.

II. Methodology

This study was a hospital based prospective cross sectional study conducted from April 2018 to September 2018 in Department of Paediatrics and Neonatology, Rajendra Institute of Medical Sciences. All the cases registered in the study were interrogated for detailed history, clinically examined thoroughly and investigated. Total 357 cases were registered and examined.

III. Results

In this study, 357 patients are categorised 3 groups. Patients who were hospitalised for 7-10 days into group A, who were hospitalised for 10-14 days into group B and who were hospitalized for more than 14 days into group C.

Each group is examined, diagnosed, reason for the length of stay was tabulated as follows.

Out of 357 patients 173 are neonates and 184 are of paediatric age group. Of these patients 138 patients stayed for 7-10 days in hospital(Group A), 147 patients stayed for 10-14 days (Group B) and 72 patients were admitted in hospital for more than 14 days (Group C).

Completion of the course of treatment of common illness and delayed investigation of common illness associated with less length of stay, complication during treatment and misdiagnosis associated with moderately prolonged length of stay and severe illness like encephalitis, chronic kidney disease , hepatic encephalopathy, birth asphyxia, meningitis, extremely low birth weight are associated with prolonged length of stay in the hospital.

Total no of patients N=357	Group A	Group B	Group C
ALS	7-10 days	10-14 days	> 14 days
Causes of ALS in paediatric age group (n = 184)	To complete course of treatment(11) Urinary tract infection((12) Acute gastroenteritis(18) Lower Respiratory Tract Illness(16)	Development of complication(18) Nosocomial infection(39)	Encephalitis(17) Chronic kidney diseases (13) Hepatic encephalopathy(9)
	Delayed investigation and diagnosis(19)	Misdiagnosis(12)	
Causes of ALS in neonates (n=173)	To complete course of treatment(13) Infant of Diabetic Mother(7) Low Birth Weight(9) Prematurity(8)	Misdiagnosis(7)	Birth asphyxia(13) Meningitis(6) Extremely lowbirth weight baby(14)
	Delayed investigation and diagnosis(6)	Necrotizing enterocolitis(14) Neonatal hyperbilirubinemia(17) Sepsis(12) Pneumonia(11) Respiratory distress syndrome(17)	
	Transient tachypnea of newborn(9) Meconium aspiration syndrome(10)		

IV. Discussion

Out of 357 patients 173 are neonates and 184 are of paediatric age group. Of these patients 138 patients stayed for 7-10 days in hospital (Group A), 147 patients stayed for 10-14 days (Group B) and 72 patients were admitted in hospital for more than 14 days (Group C). Completion of the course of treatment of common illness and delayed investigation of common illness associated with less length of stay, complication during treatment and misdiagnosis associated with moderately prolonged length of stay and severe illness like encephalitis, chronic kidney disease, hepatic encephalopathy, birth asphyxia, meningitis, extremely low birth weight are associated with prolonged length of stay in the hospital.

V. Conclusion

This study demonstrate that chronic and severe episodes of diseases have considerably longer length of stay where as communities with a high proportion of infectious diseases tend to have a shorter ALS. Primary factors affecting length of stay cannot be controlled by Hospital. Investigations or diagnostic procedures are secondary factor which affects average length of stay.

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