EDITORIAL

Appropriateness Tools to Decide Hospitalization: Are we Ready?

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One of the major issues faced by India is provision of healthcare services to its ever-growing population. Data from the World Bank shows that the number of beds available for 1000 persons fell from 0.9 to 0.7 from 2005 to 2012 [1]. This is despite the fact that India witnessed unprecedented funding for health through the National Rural Health Mission (NRHM) during the same period. Since 2014, there has been a reduction in funds allocated towards health in the Indian budget [2]. As access to information improves and education levels rise, it is expected that healthcare seeking will increase, and thus the burden on hospitals. The relative reduction of health resources implies that these be used more efficiently. Preventing inappropriate hospitalization is one such crucial step that needs to be taken.

In this issue of *Indian Pediatrics*, Das, *et al*. [3] present the development of the Pediatric Appropriate Evaluation Protocol (PAEP) that is specific to India. This development of the PAEP at the time of launch of Ayushman Bharat is a good coincidence and gives more clarity to stakeholders in the new healthcare program that is being rolled out currently [4].

The literature about PAEP is scant; most of the work on this aspect has happened in developed countries, and mostly over two decades ago. The high-income countries have healthcare systems, which are either insurance-led with multiple payers, or a single payer system that is often the government [5,6]. The insurance coverage often determines how a patient is managed as reimbursement is determined based on appropriateness of interventions. Thus not only hospitalizations, many other interventions are examined from a viewpoint of being reimbursable or not [7]. The relative lack of PAEP studies in the last two decades from the developed world may stem from this fact.

In India, we have a burdened public health system with more patients than beds, coexisting with an out-of-pocket expenditure on private healthcare system (only a miniscule 5% is covered by private insurance) [8]. An India-specific PAEP will ensure that overburdening of public health systems is addressed while simultaneously reducing the number of unnecessary hospitalizations. As seen in a previous study, minor modifications in the admission policy in hospitals can foster better utilization of the beds [9]. Usage of this tool can allow hospitals to devise new policies for better allocation of resources.

The experts who formulated the Indian version belong to various institutions but none of them seem to be representing the private sector. This is a factor that needs attention as a large percentage of healthcare in the country is provided by the private sector, especially in secondary- and tertiary-care centers [10]. Nonetheless this is a tool that needed to be developed. The next steps would be to use this in various settings across India, and gather evidence for its consistency. Such data will allow further modification or development of a battery of tools that can be used in different settings. Thus, we could have similar tools for hospitalization in surgery units, oncology units, orthopedic units, *etc*. This is needed as previous studies have shown that inappropriate hospitalization and duration is related to location of hospitalization [11].

The tool development process has been rigorous, and its limitations have been well laid out. Hence, it is essential that we understand that the tool while being used to evaluate appropriateness of hospitalization should not be used for rejecting insurance claims or be used in court by dissatisfied parents. It should preferably be used as a tool for improvement in the quality of care that a health facility provides, and for better utilization of resources.

While the appropriateness is relatively high, it may stem from assessment of admissions in hospitals where there are high patient load and a relative lack of beds, and thus only necessary hospitalizations occur. However, in a resource-rich environment, this may not necessarily be true and the inappropriateness may be high as is seen in an Italian study, where daytime hospitalizations were inappropriate with over-cautious

physicians being another factor [12]. An evaluation of the PAEP Indian tool in the private Indian setup may show interesting data.

The development of this tool also shows the need to develop more such instruments to evaluate pediatric inpatients. The appropriateness of duration of admission as well as the quality of discharge summaries and follow-up advice are the other areas that need to be addressed. The improvement in the delivery of healthcare is a continuous process and we need more such tools that have been developed for India to ensure that we deliver care that is contextual, effective and resource-sparing.

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REFERENCES

1. Hospital Beds (per 1,000 people) | Data. Available from: *https://data.worldbank.org/indicator/SH.MED.BEDS.ZS?end=2014&name_desc=false&start=2014&view=map*. Accessed November 18, 2018.
2. Bhaumik S. Misplaced priorities in the Union Health Budget 2015. J Family Med Prim Care. 2015;4:174-6.
3. Das M, Arora N, Poluru R, Seth A, Aggarwal A, Dubey A, *et al*. Pediatric Appropriate Evaluation Protocol for India (PAEP-India): Tool for Assessing Appropriateness of Pediatric Hospitalization. Indian Pediatr. 2018;55:1041-5.
4. Lahariya C. 'Ayushman Bharat' Program and Universal Health Coverage in India. Indian Pediatr. 2018;55:495-506.
5. Vaithianathan R, Lewis G. The NHS as an insurer. J Health Serv Res Policy. 2010;15:171-3.
6. Daniels N. Decisions about access to health care and accountability for reasonableness. J Urban Health. 1999;76:176-91.
7. Weiner AB, Conti RM, Eggener SE. National economic conditions and patient insurance status predict prostate cancer diagnosis rates and management decisions. J Urol. 2016;195:1383-9.
8. Duggal R. Private health insurance and access to healthcare. Indian J Med Ethics. 2011;8:28-30.
9. Roy RN, Shrivastava P, Das DK, Saha I, Sarkar AP. Burden of hospitalized pediatric morbidity and utilization of beds in a tertiary care hospital of Kolkata, India. Indian J Comm Med. 2012;37:252.
10. Patel V, Parikh R, Nandraj S, Balasubramaniam P, Narayan K, Paul VK, *et al*. Assuring health coverage for all in India. Lancet. 2015;386:2422-35.
11. Vincitorio D, Chiaradia G, de Waure C, Kambale JM, La Torre G, Di Stanislao F. Appropriateness of admission and days of stay in pediatric hospital in Ancona, Italy. J Public Health. 2010;18:497-503.
12. Bianco A, Pileggi C, Trani F, Angelillo IF. Appropriateness of admissions and days of stay in pediatric wards of Italy. Pediatrics. 2003;112:124-8.