Observation for Infants and Children
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Terminology and Global Scope

There has been a long history of observation units (OUs) being used for the diagnosis and/or treatment of children and infants with many different illnesses and injuries throughout the world (United States, Canada, Australia, Great Britain, France)\(^1\)-\(^7\), and in all types of settings including pediatric hospitals, general hospitals, academic or teaching and community hospitals. The terms used may vary: including observation unit, clinical decision unit, holding room, short stay unit, short stay ward, short stay observation unit and holding unit; but the principles are the same: the provision of high quality, efficient (decreased length of stay), and cost effective care, whether the patient is a child or even an infant, as well as for adults.

History

Indeed, pediatric observation medicine may even antedate the adoption and widespread use of observation for adults with chest pain and other diagnoses. As early as 1969 (results published in 1972), 447 pediatric patients with all types of diagnoses were treated in a pediatric emergency area of an outpatient clinic with documented cost savings, a 1% readmission rate, and the prevention of 20.6 admissions to the hospital per month saving 2,480 hospital days.\(^8\) Other studies in the 1970s continued to document the successful treatment of asthmatics\(^9\) and children with all types of illnesses in the United States.\(^10\) Since then reports have continued to note the accomplishments of pediatric observation medicine in the ensuing decades.\(^11\), \(^12\)

Diagnoses/Conditions Managed in the Observation Unit

All types of patients: both medical and surgical and trauma patients have been managed in an observation unit. Asthma is the most common diagnosis for pediatric observation patients followed by dehydration/gastroenteritis.\(^8\), \(^11\)-\(^13\), Other common diagnoses include pneumonia, abdominal pain, seizures, fever, bronchiolitis, croup, trauma, and ingestions. The use of the OU to manage pediatric patients with traumatic injuries including closed head injuries and orthopedic injuries has been reported in multiple studies in the United States and internationally.\(^5\), \(^7\),\(^13\)-\(^16\)

Locations of Pediatric Observation

Although much of the literature is from pediatric observation units in Children’s Hospitals,\(^1\)-\(^6\), \(^9\), \(^10\), \(^14\), \(^15\) there are also reports of children and infants successfully managed in Observation Units (OUs) in general hospitals where both adult and pediatric patients are treated in the same unit, termed a “hybrid” unit by some, and in community hospitals\(^1\), \(^12\), \(^13\), \(^17\) as well as in academic or tertiary care hospitals.

Ages of Patients Managed in Observation Unit

All ages of pediatric patients, even infants and neonates have been successfully managed in OUs. One study of 78 infants/children (mean age 19 months, range 14 months – 12.6 years) status post uncomplicated barium enema compared inpatients and OU patients. The baseline characteristics were similar in both groups but the OU patients a significantly shorter length of stay (LOS): 7.12 hours (OU) vs. 22.7 (inpatients) (p< 0.001).\(^18\) A study of neonatal (median age 5 days) hyperbilirubinemia found a significant difference at p < 0.0001 in LOS (hours) between pre-OU (historical controls) 41.8 vs. 17.8 and in median time (hours) to phototherapy: pre-OU 6.7 and OU 1.6.\(^19\)

Benefits of Pediatric Observation Units
The benefits of observation for children and infants are similar for adults: better patient care, shorter LOS, better patient/family and referring physician satisfaction, and decreased cost.\textsuperscript{11, 12}

References