

Characteristics of Pediatric Inpatients in Public Hospitals: A Study at Cut Nyak Dhien General Hospital in 2024

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Abstract

In Indonesia, the number of hospitalizations in pediatric patients reaches 2.3% of the total population. The high rate of hospitalization in children is because the immune system of children is still not perfect. There is still incomplete data on pediatric patients treated at Cut Nyak Dhien Hospital, West Aceh. The purpose of this study was to determine the characteristics of pediatric patients treated in the pediatric care unit of Cut Nyak Dhien Hospital, West Aceh in 2024. The research method used descriptive cross-sectional. Data was taken from the SIMRS application/Hospital Management Information System for children aged 0 to <18 years, from January to December 2024. The results of the study obtained 1,952 subjects who were admitted to the pediatric care unit. The majority of the subjects were female (55.8%) and aged over 3 years (63.5%) with the most common cause of illness due to viral infections (31.3%).

Keywords: Child; Hospitalization; Patient

Introduction

A child is someone who is not yet 18 years old, including children still in the womb (Kemenkes RI, 2014). Children are unique individuals and have needs according to their stage of development. Children also have various needs that differ from one another according to growth and development. Physiological needs such as nutrition and fluids, activity, elimination, sleep and others, while psychological, social and spiritual needs that will be seen according to their growth and development. (Agustina, 2022)

Children are individuals who are susceptible to various diseases, sick conditions in children are often experienced by every child because of their imperfect immune system. In sick conditions, children sometimes need therapy that requires children to be hospitalized or what is often called hospitalization. Hospitalization itself is a condition that requires a person to stay in the hospital undergoing therapy and treatment to restore their health, hospitalization also allows children to experience trauma and may also experience stress (Supartini, 2019)

Children's anxiety and fear due to hospitalization can have short-term and long-term impacts. The short-term impact of anxiety and fear that is not immediately addressed will make children reject the care and treatment provided, thus affecting the length of hospitalization days, aggravating the child's condition and can even cause death in children. While the long-term impact that is not immediately addressed will cause difficulty and poor reading skills, have language and cognitive development disorders, decreased intellectual

and social abilities and immune function (Saputro and Farzin, 2017)

Children's cooperative behavior during hospitalization is essential in the healing process. Uncooperative behavior of children during hospitalization can be handled by conducting play therapy. Play is one of the elements that play a role in the process of physical development, intellectual, emotional, social, and creative abilities of children (Soetjiningsih and Ranuh, 2020). Child health efforts must be carried out in an integrated, integrated and sustainable manner to maintain and improve children's health status in the form of disease prevention, disease treatment, and health recovery (Regulation of the Minister of Health of the Republic of Indonesia Number 25, 2014).

According to Unicef's 2019 data, one-third of Indonesia's population are children. This number is equivalent to around 85 million children and is the fourth largest number in the world. Other data in the same year from The United Nations population division. The Inter-Agency Group for Child Mortality Estimation (UN-IGME), shows that the highest number of child deaths in developing countries is caused by birth history, neonatal sepsis, pneumonia, diarrhea, malaria, dengue infection and measles accompanied by bacterial sepsis (Pang et al., 2014). The high number of child deaths in developing countries requires pediatricians in hospitals to not only treat patients with mild illnesses such as diarrhea, but also treat pediatric patients with severe infectious diseases such as tuberculosis and other chronic diseases such as type-1 diabetes mellitus to cancer. (National Population and Family Planning Agency, 2017).

Based on 2017 data from the results of the Indonesian demographic and health survey (SKDI) in 2013-2017, the infant mortality rate (IMR) was 24 deaths per 1000 live births and the mortality rate under the age of 5 years was 32 deaths per 1000 live births (Department of Health. 2009). Some of the research above can be concluded that children under the age of 5 are vulnerable to illness and require further treatment in the hospital, so the hospital is the first referral place after the puskesmas.

Hospitals according to Law No. 44 of 2009 are health service institutions that organize comprehensive individual health services that provide inpatient, outpatient, and emergency services (Fitriyanah et al., 2017). So that the inpatient room is one of the most important parts of the hospital. For this reason, inpatients must receive good and appropriate service and their management must be taken seriously (Health Research and Development Agency. (2018).

In Indonesia, the number of hospitalizations in pediatric patients reaches 2.3% of the total population (Central Agency for Statistics. (2020). Through this study, researchers are interested in knowing how the characteristics of pediatric patients hospitalized in the pediatric care unit of Cut Nyak Dhien Hospital and this study can also be useful data for health, especially in West Aceh Regency.

Methods

This study is a descriptive cros-sectional study to assess the characteristics of cases in children hospitalized in the pediatric care unit of Cut Nyak Dhien Hospital from January to December 2024. Data on

name, gender, date of birth, address, date of admission and date of discharge, and diagnosis of the patient's disease were taken from the SIMRS application / Hospital Management Information System. The sampling strategy used the non-probability method. Samples were collected at the discretion of the researcher.

Researchers determined the inclusion and exclusion criteria for research subjects. The inclusion criteria were 1) all patients aged <18 years, and 2) patients hospitalized >24 hours. The exclusion criteria were patients aged >18 years, and 2) patients who were hospitalized <24 hours.

Results

Based on the research data, the number of pediatric patients hospitalized at Cut Nyak Dhien Hospital from January to December 2024 was 1,952 subjects. Data on the basic characteristics of the research subjects in the form of gender (Table 1), age (Table 2), and division diagnosis (Table 3).

Table 1. Characteristics Based On Gender

Gender	Amount	Percentage (%)
Male	863	44.2%
Female	1.089	55.8%
Total	1.952	100%

Table 2. Characteristics Based On Age

Age (Year)	Amount	Percentage (%)
0 – 1	232	11.9%
>1 - <3	481	24.6%
3 - <18	1.239	63.5%
Total	1.952	100%

Table 3. Characteristics Based On Diagnosis

Diagnosis	Amount	Percentage (%)
Virus Infection	611	31.3%
Bacterial Infection	474	24.3%
Dyspepsia	388	19.9%
GEA	265	13.6%
GERD	214	10.9%
Total	1.952	100%

Discussion

SUSENAS data states that women are the most common gender compared to men who are hospitalized (Nora et al., 2020). These data are in line with the results of this study, all subjects in this study showed that women were also the most common gender in cases of hospitalization. However, different results in a study

conducted in the pediatric intensive care unit of Dr. Zainoel Abidin Hospital Banda Aceh reported that males were more prevalent (57.6%) than females (42.4%) (Dewi, 2019). This is due to increased pro-inflammatory mediators in boys compared to girls who have more anti-inflammatory mediators (Usmar et al., 2017).

The percentage of children's age characteristics in Table 2 shows that ages above 3 years to under 18 years are the most common age (63.5%) in cases of pediatric hospitalization at Cut Nyak Dhin Hospital. The same results obtained in a 2016 study showed that the percentage of preschool-aged children (3-6 years) hospitalized was 52.38% while the percentage of school-aged children (7-11 years) was 47.62%. It can be concluded that preschool children are more susceptible to disease and are afraid and anxious when receiving treatment at the hospital (Central Agency for Statistics. 2020).

In Table 3, viral infection was the most common diagnosis group (31.3%), followed by bacterial infection (24.3%), dyspepsia (19.9%), acute gastroenteritis/GEA (13.6%) and gastroesophageal reflux disease/GERD (10.9%). By definition, a viral infection is a disease caused by a pathogen in the form of a virus that arises through transmission from an infected person, infected animal, or contaminated inanimate object to a susceptible host (Ningtyas, 2015). Children are the most vulnerable age group to viral infections and are also one of the health problems that continues to be a major concern in pediatrics worldwide. Children, especially those under 5 years old, have immune systems that are not yet fully mature, making them more susceptible to various types of viral infections. In Indonesia alone, viral infections in children can occur throughout the year, and often lead to more serious complications if not treated quickly and appropriately.

One of the many diseases caused by viruses in children is measles. Data states that deaths from measles in children are caused by paramyxoviruses. Measles is one of the infectious diseases included in the priority health problems, because this disease can be easily transmitted so that it can cause outbreaks or extraordinary events. Measles is ranked as the fourth cause of outbreaks in Indonesia after dengue fever, diarrhea and chikungunya (Ministry of Health RI, 2016). In the case of measles patients for the world, it was reported in 2013 reached 777,000 people, 202,000 of which came from the Association of the South East Asia Nation (ASEAN), and 15% of measles deaths came from Indonesia. Each year an estimated 30,000 Indonesian children die from measles complications (Nitiyoso, 2018).

Virus infections such as Influenza/flu are also one of the most common respiratory diseases in children, causing an estimated 3 to 5 million illnesses to become more severe and an estimated 250,000 to 500,000 deaths each year. Children or patients with comorbidities are at higher risk of death. In equatorial countries like Indonesia, flu can occur throughout the year regardless of the season but in countries with 4 seasons, flu often occurs in winter.

Another study also stated that the most common viral infection in children can be caused by Respiratory Syncytial Virus (RSV). RSV is one of the main causes of acute lower respiratory tract infections. Especially in children under one year of age (Walker, 1994). Worldwide there are an estimated 33 million cases of URTI per year associated with RSV in children under 5 years of age and 3.2 million of them require

hospitalization (Henrickson, 2004). In addition, RSV virus infection is one of the main causes of death of 60 thousand deaths per year worldwide in children under 5 years of age.

The limitation of this study is that there is no complete data recorded in SIMRS regarding the previous management and comorbidities before the patient was admitted to Cut Nyak Dhien Hospital. The advantage of this study is that it can provide preliminary data on the characteristics of patients admitted to the pediatric inpatient room so that further research can be carried out on pediatric patients treated at Cut Nyak Dhien Hospital, West Aceh.

This study shows the characteristics of pediatric patients hospitalized in the pediatric ward of Cut Nyak Dhien Hospital, West Aceh in 2024. During the study period, there were 1,952 pediatric patients admitted to the pediatric ward. The majority of the subjects were female aged over 3 years with the most common cause being virus infections.

Conclusion

This study shows the characteristics of pediatric patients hospitalized in the pediatric ward of Cut Nyak Dhien Hospital, West Aceh in 2024. During the study period, there were 1,952 pediatric patients admitted to the pediatric ward. The majority of the subjects were female aged over 3 years with the most common cause being virus infections.

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