

## FREQUENCY OF RELAPSE FOR SEVERE ACUTE MALNUTRITION AND ASSOCIATED FACTORS AMONG UNDER FIVE CHILDREN ADMITTED TO HEALTH FACILITIES IN HADIYA ZONE, SOUTH ETHIOPIA.

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**Background:**

Severe acute malnutrition is a common cause of morbidity and mortality among under five children in Ethiopia. A child may experience more than one episode of SAM depending on the improvement of the underlying factors. However, there is no study that determined the frequency of relapse of SAM cases after discharge in Ethiopia.

**Objective:**

To identify the frequency of relapse and associated factors among children discharged after undergoing treatment for SAM in Hadiya Zone, South, Ethiopia

**Methods:**

An institution based retrospective cohort study was done among children admitted to health posts for treatment of SAM from 2014/2015-2019/2020 under-five children's after discharge in health post for severe acute malnutrition in the last five years in Hadiya zone, SNNPR, Ethiopia. Both first admission data and relapse data were abstracted from the records of the SAM children from August 1 – 30 /2020 Using a data collection format. Data were coded and edited manually, then doubly entered into Epi-Data statistical software version 3.1 and then exported to SPSS

for windows version 26. After checking all the assumptions finally Negative binomial regression for poisson has been used. All tests were two sided and P values <0.05 were used to declare statistical significance.

**Results:**

In the last five year there were the proportion of relapsed cases were 9.6%, 95% CI: ( 7.7% , 11.7%) On multivariable negative binomial regression model, after adjusting for background variables relapse of severe acute undernutrition was significantly associated with having edema during admission with (IRR=2.21, 95% CI:1.303-3.732), being in the age group of 6-11 months (IRR=4.74,95% CI:1.79-12.53), discharge MUAC for the first admission ( P=0.001, IRR=0.37, 95% CI:0.270-0.50) increase the risk of incidence rate ratio(IRR) relapse case of severe acute under nutrition.

**Conclusion:**

Frequency of SAM relapse was positively associated with age, having edema during admission, while it was negatively associated with discharge MUAC. The results imply the need for reviewing the discharge criteria taking into account the recovery of MUAC as a marker for lean tissue accretion, especially in edematous children and those in the younger age,

**Keywords;** Relapse, Incidence rate ratio, SAM, under five children, Ethiopia.

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