

## Developmental Difficulties Prevalence and Management Capacities among Children Including Genetic Disease in a North Coastal District of Andhra Pradesh, India: A Cross-sectional Study

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**Abstract :** The present study was aimed to find out the prevalence of DD's in Visakhapatnam, one of the north coastal districts of Andhra Pradesh, India during a span of five years. A cross-sectional investigation was held at District early intervention center (DEIC), Visakhapatnam from 2016 to 2020. To identify the pattern and trend of different DD's including seasonal variations, a retrospective analysis of the health center's inpatient database for the past 5 years was done. Male and female children aged 2 months-18 years are included in the study with the prior permission of the concerned medical officer. The screening tool developed by the Ministry of health and family welfare, India, was used for the study. Among 26,423 cases, children with birth defects are 962, 2229 with deficiencies, 7516 with diseases, and 15716 with disabilities were admitted during the study period. From birth defects, congenital deafness occurred in large numbers with 22.66%, and neural tube defect observed in a small number of cases with 0.83% during the period. From the side of deficiencies, severe acute malnutrition has mostly occurred (66.80 %) and a small number of children were affected with goiter (1.70%). Among the diseases, dental caries (67.97%) are mostly found and these cases were at peak during the years 2016 and 2019. From disabilities, children with vision impairment (20.55%) have mostly approached the center. Over the past 5 years, the admission rate of down's syndrome and congenital deafness cases showed a rising trend up to 2019 and then declined. Hearing impairment, motor delay, and learning disorder showed a steep rise and gradual decline trend, whereas severe anemia, vitamin-D deficiency, otitis media, reactive airway disease, and attention deficit hyperactivity disorder showed a declining trend. However, congenital heart diseases, dental caries, and vision impairment admission rates showed a zigzag pattern over the past 5 years. This center had inadequate diagnostic facilities related to genetic disease management. For advanced confirmation, the cases are referred to a district government hospital or private diagnostic laboratories in the city for genetic tests. Information regarding the overall burden and pattern of admissions in the health center is obtained by the review of DEIC records. Through this study, it is observed that the incidence of birth defects, as well as genetic disease burden, is high in the Visakhapatnam district. Hence there is a need for strengthening of management services for these diseases in this region.

**Keywords :** child health screening, developmental delays, district early intervention center, genetic disease management, infrastructural facility, Visakhapatnam district

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