

## Prevalence of Adenovirus among Children with Gastroenteritis/ Diarrhea in Warri, Delta State, Southern, Nigeria

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### Dear Editor-in-Chief,

Adenovirus are double stranded DNA viruses, known to be capable of causing various kind of illnesses from mild respiratory infections in young children (known as the common cold) to life-threatening multi-organ disease in people with a weakened immune system (1). In humans, there are 57 accepted human adenovirus types (HAdV-1 to 57) in seven species (Human adenovirus A to G) (1). Adenovirus is currently recognized as one of the viral causes of diarrhea/gastroenteritis among children (2), with types 40 and 41 predominating as common causes of gastroenteritis, especially in children under the age of two year-old (2). This letter reports the preliminary investigation on the prevalence of Adenovirus among children (under-5 years old) presenting with diarrhea/gastroenteritis at the pediatric outpatients of Central Hospital, Warri, a tertiary health care facility in Delta State, South-South, Nigeria. Ethical approval was provided by the Delta Hospitals Management board in the letter CHW/VOL 1/17/14. This study included a total of 100 subjects, 75 children with clinical diarrhea/gastroenteritis, and 25 age and sex matched healthy children as controls. Adenovirus was detected in fecal specimens of subjects using a rapid lateral flow immunochromatographic assay kit (Gastro Vir-Strip, Coris Bioconcept, Belgium).

Data on demographics and social characteristics were obtained with the aid of a self-administered questionnaire. The prevalence of Adenovirus was 14.7% (11/75 patients); Adenovirus was not detected among the control subjects. The prevalence of Adenovirus was more in Males than females, but this were not significantly different (odds ratio [OR]: 0.9592, 95% confidence interval [CI]: 0.2576, 3.5712). Adenovirus prevalence was also independent of age (P=0.9045). The prevalence of Adenovirus in this locality is quite close to the prevalence of 18%, and 19.3% in neighboring states of Ondo and Edo, Nigeria (3, 4), but less than 23% among children in Northwestern, Nigeria (5). In conclusion, the prevalence of Adenovirus was high; and was independent of age and gender. There is need for routine screening of Adenovirus among children with gastroenteritis/diarrhea in our locality irrespective of age or gender. Further studies are needed to provide information on prevalent Adenovirus subtypes and genotypes in this study location.

**Key Words:** Adenovirus, Children, Diarrhea, Nigeria, Prevalence.

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## **AUTHOR'S CONTRIBUTION**

W-J QB carried out study design, conceptualization and result verification. FO carried out subject recruitment, sample analysis and statistical analysis. Both authors approved the final paper

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