

# Retrospective Chart Review of Hospitalizations and Health Problems of Children with Velocardiofacial Syndrome

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## Abstract

Velocardiofacial syndrome (VCFS) is a genetic condition caused by the deletion of chromosome region 22q11.2-22q11.2. The majority of VCFS research has focused on recognition of VCFS and the effects of heart and palate defects on individuals with this condition. Few studies have examined the contribution of VCFS to pediatric hospitalization. Therefore, the purpose of this retrospective chart review was to: 1) describe and quantify the hospitalization and health problems of children with VCFS during the first five years of life, and 2) compare the medical needs of children with VCFS to children with isolated heart defects, isolated palate defects, and typical healthy children. Data on hospitalization, birth defects, and health concerns for all cohorts were collected. When heart- and palate-related surgical hospitalizations were excluded, children with VCFS required a significantly greater number of hospitalizations in the first year ( $p=0.0015$ ) and second through fifth years ( $p=0.0066$ ) of life. A greater percentage of children with VCFS were hospitalized for respiratory illness than were children in other cohorts ( $p=0.0100$ ). Individuals with VCFS were more likely to be diagnosed with a feeding problem ( $p<0.0001$ ), failure to thrive (FTT) ( $p=0.0059$ ), and hypotonia ( $p<0.0001$ ) than individuals in other cohorts. Because of the high risk for feeding problems and FTT, all individuals with VCFS should undergo a multidisciplinary feeding team evaluation. Care must be taken not to falsely attribute failure to thrive to congenital heart disease or to poor parenting skills. Because VCFS is a risk factor for respiratory illness, parents should be educated on methods to reduce environmental risk factors for respiratory illness, including smoke, from the child's environment. Future prospective studies should expand upon this knowledge and examine the hospitalizations and medical needs of children with VCFS beyond age five years.