Some children's asthma symptoms may improve at puberty, but up to two thirds of children with asthma continue to have symptoms through puberty and into adulthood. The prognosis for control or disappearance of symptoms varies in children from those who have rare and infrequent attacks to those who are constantly wheezing or are subject to status asthmaticus. Risk factors that may predict the persistence of symptoms into childhood (from infancy) include atopy, male gender, exposure to environmental tobacco, and maternal history of asthma. Many children who outgrow their exacerbations continue to have airway hyperresponsiveness and cough as adults.

The younger child and adolescent age group appear to be the most vulnerable, with the greatest increase occurring in children younger than 4 years old and 12 to 17 years old (Hasegawa, Tsugawa, Brown, et al, 2013). No reliable data exist to explain this increase. Factors that have been postulated include exposure of atopic persons to more allergens (particularly in large urban centers), change in severity of the disease, abuse of drug therapy (toxicity), failure of families and practitioners to recognize the severity of asthma, and psychological factors, such as denial and refusal to accept the disease. On the other hand, studies have shown that children living in rural areas and farming communities have a decreased incidence of asthma and allergy (Liu, Covar, Spahn, et al, 2016).

Risk factors for asthma-related deaths include early onset, frequent attacks, difficult-to-manage disease, adolescence, history of respiratory failure, psychological problems (refusal to take medications), dependency on or misuse of asthma drugs (high use), presence of physical stigmata (barrel chest, intercostal retractions), and abnormal PFT results.

Nursing Care Management

Acute Asthma Care

Children who are admitted to the hospital with acute asthma are ill, anxious, and uncomfortable. The importance of continual observation and assessment cannot be overemphasized.

When β_2-agonists, supplemental oxygen, and corticosteroids are given, the child is monitored closely and continuously for relief of