Reviewing Effectiveness of Nurse-Led Pediatric Asthma Education Programs in Preventing Hospital Recidivism and Missed-School Days

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**Background**
- Asthma is a serious public health issue in the United States.
- Asthma is a chronic lung disease that is characterized by restriction of air flow.
- Irritants are referred to as triggers.
- Triggers include respiratory infections, stress, physical activity, allergies, pollutants, and changes in weather.
- Symptoms include coughing, shortness of breath, chest tightness, and/or wheezing.

**Goals**
- To eliminate disparities in care through expanded education programs.
- Increase compliance to preventative measures such as maintenance medications and allergen preventions.
- Encourage ongoing assessment of control to prevent hospital readmission.

**Impact on Children**
- Asthma most often occurs early in life.
- Greatest burden among 10-14 year olds.
- 7.1 million children have asthma in the United States.

**Literature Review**
This literature review assesses the effectiveness of nurse-led asthma education based on recommendations of the National Asthma Education and Prevention Program Expert Panel Report.

**Data Reviewed**
- 10 studies were reviewed.
- Studies involved school-based education, hospital-based education, and the use of technology in health education.
- School-based education reduces exacerbations.
- Socio-economic status correlates with the rate of Emergency Department revisits.
- The use of technology increases convenience and compliance.

**Expert Panel Report**
- Found that minorities are disproportionately affected by asthma.
- Asthma caused 10.5 million missed school days and 14.2 million missed work days for caregivers.
- Economic burden is $56 billion dollars to the U.S. economy.
- Adequate control of asthma can be obtained through treatment and education.
- Schools are ideal asthma education locations because they allow access to large groups of children in a learning mindset.

**Technology in Healthcare**
- Interactive Data Collection studies show that children prefer interactive assessments since they appeal to the child’s imagination.
- iPad with translation software used on a Pediatric unit increased patient satisfaction along with the caregivers.
- Teenagers showed increased compliance when using a smartphone application to communicate with their RN coordinator.
- Telehealth, when combined with regular follow-up, reduced disparity regarding access to care in rural areas.

**Conclusion**
- Multiple measures of control are needed in all aspects of a patient’s life.
- Ongoing assessment is key to prevent exacerbation, which leads to missed school.
- Education remains the best form of prevention.
- Nurse-led teaching in schools helps capture children who may not be able to visit a medical provider.
- Technology helps close gaps in care among underserved populations, which have the highest incidence of asthma complications.