Bakersfield City Schools District (BCSD) is the largest school system in Kern County and serves more than 29,000 students. **One in eight of their students suffer from asthma.** BCSD actively seeks ways to address health issues that interfere with student learning and decided in 2013 that something had to be done to overcome this obstacle to success.

Kern Health Systems (KHS) is the public agency that operates the county’s local Medi-Cal health plan, Kern Family Health Care. In February 2015, more than 70% of the county’s Medi-Cal Managed Care population was enrolled with KHS. The health plan works closely with the community to address local health issues.

**High asthma rates highlight the need for a school-based intervention**

The school district first needed to determine how many students would be impacted by an asthma intervention. The district nurse ran a report on student attendance and compared it to student health records including indicators around asthma, obesity, and diabetes.

The district nurse was also interested in the health of the larger community. She decided to compare BCSD’s asthma rates with quality measurement scores for Kern Family Health Care. The health plan’s scores for adolescent health, including asthma, were very low. BCSD saw this as an opportunity to propose an asthma management program to Kern Health Systems in order to address the quality measurement scores and attendance rates related to asthma.

Kern Health Systems was immediately interested in BCSD’s asthma management program. The health plan was looking for strategies to improve their quality measures related to adolescent health, and they realized a partnership with the school district provided a unique opportunity to reach families.

BCSD signed a service provider agreement with KHS to launch the asthma management program. The program was designed to capitalize on the district’s access to the health plan’s members. District nurses would identify students with asthma, conduct asthma education at school and in the home, and provide follow-up case management services. KHS agreed to pay BCSD on a quarterly basis for each service or activity provided to health plan members enrolled in the asthma management program. For reimbursement, the school district agreed to submit quarterly reports to KHS, including a list of health plan members that participated in program interventions.

**School District: Bakersfield City School District**

- 88.4% are eligible for free and reduced priced meals
- 34.5% are English language learners
- 73% live in homes where Spanish is spoken
- 80% of the pediatric population in the county are attending a school in the district

**Health Plan: Kern Family Health Care**

- 72% of county Medi-Cal Managed Care population is enrolled in the health plan
- 45% of children and youth in the county are enrolled in Medi-Cal
- 828 children and youth were hospitalized for asthma in 2012

**Asthma management program launched to address school absences and hospitalizations**

The asthma management program launched in February 2013 with a goal of reaching 65 to 75 students. The program prioritized students who had five or more asthma-related absences, two or more asthma ER visits, and one asthma-related hospitalization within the past twelve months. To determine which students were eligible for reimbursement from the health plan, the school district initially checked if a student had health coverage and sent a roster of program participants to KHS. The health plan notified the school which students were enrolled in the health plan, had asthma-related ER visits and hospitalizations, and met the criteria for the program.
Managing Asthma in the Central Valley

The program included four activities:

1. **Initial home visits**: District nurses provided parent education on asthma triggers in the home and how to prevent asthma attacks.

2. **Classroom education**: District nurses implemented *Open Airwaves for Schools* and *Wee Breathers* to educate students with asthma. The asthma education consisted of six consecutive sessions at least one time a week and focused on six topics:
   - Basic information on asthma and gauging student feelings about their asthma.
   - Recognizing and managing asthma symptoms.
   - Appropriate use of medications.
   - Identifying and controlling asthma triggers.
   - Encouraging physical activity.
   - Managing asthma at school.

3. **Follow-up home visits**: District nurses reviewed information from the initial home visits, reinforced education, and answered questions.

4. **Individual education**: District nurses provided one-on-one individual education.

**Initial findings show improvement in care coordination**

The first year of the program will be completed this summer. Kern Health Systems will review how many members were served and analyze data on their follow-up doctor visits, medication utilization, and hospitalization rates. BCSD will evaluate participant test scores and attendance, and compare them to previous academic years.

There are some initial findings:

- **Successes**: Through the pilot, a successful care coordination process was established between BCSD nurses and the primary care providers of students with asthma. This included scheduling doctor appointments, flagging students who miss doctor appointments, and providing asthma management equipment including spacers and incentive spirometers to patients.

- **Challenges**: Parents have expressed hesitation around nurses conducting home visits. Both the health plan and BCSD are working to address parent concerns.

The program also identified students who need asthma support but are not members of the health plan. BCSD nurses still serve these students but are not reimbursed for care.

**Expansion planned based on early successes of pilot program**

The initial success and potential of the BCSD asthma program has led Kern Health Systems to examine additional adolescent health quality measures and explore how they can be improved through partnerships with schools. The health plan is currently in conversation with two school districts on strategies to address nutrition and obesity.