Utah Department of Health & Human Services

# Report on the Asthma Home-Based Case Management Program

STATE OF UTAH

DIVISION OF INTEGRATED HEALTHCARE

OFFICE OF HEALTH PROMOTION AND PREVENTION

October 1, 2022

| | |
|---|---|
| To: | Social Services Appropriations Subcommittee |
| From: | Jennifer Strohecker, Director, Division of Integrated Healthcare |
| | Anna Fondario, Director, Office of Health Promotion and Prevention |
| | Nichole Shepard, Program Manager, Asthma Program |
| Subject: | Legislative Committee Report |

**Report Requirements**

The Legislature intends that the recipient of funding for "Asthma Home-based Case Management for 70 Medicaid Children" provide a report to the Office of the Legislative Fiscal Analyst that details the following:

(1) What specific savings were generated,

(2) Who received the savings, and

(3) What the funding sources were for these savings.

(4) Options and costs of expanding the program to more counties.

**Background**

The Utah Asthma Home Visiting Program (UAHVP) was a pilot program to deliver home-based asthma case management to individuals identified with uncontrolled asthma. Criteria for enrollment included having an asthma-related emergency department visit,

hospitalization, urgent care visit, or refilling asthma quick-relief medication more than two times per year. The UAHVP pilot was developed in 2016, by the Utah Department of Health (UDOH) Asthma Program in collaboration with community stakeholders. The UAHVP pilot was implemented in Salt Lake and Utah Counties. It provided three visits to offer asthma-self management education and an in-home environmental assessment to reduce asthma triggers. The original pilot was funded by sources other than Medicaid.

In 2018, a cost-benefit analysis of the pilot was conducted and the results showed a positive return on investment in terms of reducing asthma-related emergency department visits and hospitalizations. With these positive results in mind, for the 2020 budget cycle, UDOH recommended to the Governor's office funding to implement the UAHVP in two Medicaid fee-for-service areas. Because this project was anticipated to achieve cost savings for Medicaid, the program was funded by transferring existing funds from the Medicaid Program.

A request for proposal (RFP) was developed and local health departments (LHDs) serving Medicaid fee-for-service counties were invited to apply. Through the RFP process, the TriCounty and Southeast LHDs were selected to participate in the program. Each LHD was expected to serve 35 Medicaid members with uncontrolled asthma, per year. Because of the small population within these LHDs, both adults and children were included in the referral pool to receive case management services.

The pilot period ended on September 30, 2021. At that time, it was determined that TriCounty LHD had insufficient capacity to continue providing services due to the COVID-19 pandemic and low participant intake rates. A regional approach was proposed to address this barrier, including offering virtual services to those living in distant geographic areas. With permission from Local Health Officers, Medicaid contracted with Southeast LHD to serve seven counties: Carbon, Daggett, Duchesne, Emery, Grand, San Juan, and Uintah.

**Program Goals**

The goals of home-based asthma case management services include:

- Increase the number of Medicaid members with well-controlled asthma
- Reduce asthma-related Emergency Department (ED) visits and hospitalizations
- Reduce asthma-related urgent care and unscheduled doctor visits
- Increase use of and adherence to asthma control medications
- Improve quality of life for Medicaid members with asthma

**Actions Taken**

| | |
|---|---|
| May 2019 – February 2020 | UDOH developed and released the project RFP. In February 2020, UDOH scored RFP applications and notified LHDs of results. |
| March – April 2020 | LHD asthma coordinators trained. Home visits began in Southeast Utah LHD. COVID-19 results in discontinuation of in-home visits. UDOH worked with LHDs to develop guidelines for virtual visits. |
| May 2020 – September 2021 | Virtual home visits offered to Medicaid members. In-home visits resume as COVID community transmission rates decrease. |
| October 2021 | Pilot project period ends. One contract was renewed with Southeast LHD to serve 7 counties: Carbon, Daggett, Duchesne, Emery, Grand, San Juan, and Uintah. |
| November 2021 – September 2022 | Southeast LHD offers virtual and in-person visits. |

**Cost Savings Calculation Methodology**

Total savings was calculated as the decrease in asthma healthcare utilization costs among program participants from 12 months prior to the program to 12 months after the program using Medicaid claims data. Healthcare utilization was defined as emergency department (ED) visits, urgent care visits, and hospitalizations with asthma listed as the primary or secondary diagnosis code. Savings were calculated at an individual level. Any increased utilization experienced by a particular member was considered to be zero savings.

Program costs included contracts with LHDs to deliver home visiting services and Utah Asthma Program staff time to provide technical assistance and training to LHDs.

Despite the COVID-19 pandemic slowing implementation of home visits, 50 Medicaid members enrolled in the program, with 30 participants completing the program and reaching the 12-month post-program timeframe. The savings analysis only included those with a hospitalization, ED visit, or urgent care claim at 12 months pre- or post-program (N=12).

**Results**

<u>Program Goals & Results</u>

| Goal | Results |
|---|---|

| | |
|---|---|
| Increase the number of Medicaid members with well-controlled asthma | 60% of program participants went from uncontrolled to controlled asthma (N=18)<br><br>94% of program participants improved their asthma control (N=18) |
| Reduce asthma-related Emergency Department (ED) visits, urgent care visits, and hospitalizations | 40% decrease in total visits from 12 months pre-program to 12 months post (N=13)*<br><br>The percent of participants that had any asthma-related visit decreased from 37% at 12 months pre-program to 10% at 12 months post-program |
| Increase use of and adherence to asthma control medications | 41% improved controller medication use from visit 1 to visit 3 (N=17) |
| Improve quality of life for Medicaid members with asthma | 100% of participants said that the program would improve their quality of life (N=25)<br><br>100% of participants said they would use what they learned to better manage their asthma (N=25)<br><br>Percent Decrease in Total Number of Days:<br>● Missed school 70% (N=5)<br>● Missed work 78% (N=7) |

Source: UAHVP self-report program data; *Medicaid claims data

Cost Savings Results

Although the program run by Southeast LHD was effective in increasing asthma control and improving quality of life for enrollees, the program did not generate cost savings in the timeframe evaluated. Using the Department's formula for calculating cost savings, the program generated $1,778 in savings from reduced emergency department, inpatient, and urgent care visits. But this is outweighed by the expense of the program which was $54,813. This was primarily due to the low referral pool and enrollment rate in the

program. The program was unable to enroll enough individuals with high levels of asthma-related medical costs, and therefore most enrollees did not have substantial potential to generate savings. The program was able to make positive impacts to enrollees' lives, but these are not reflected in a cost savings calculation.

Due to the insufficient capacity related to the COVID-19 pandemic, TriCounty LHD was unable to successfully implement the program. Total expenses for TriCounty were $20,522.

**Options**

As for options and costs of expanding the program to more counties, the Department believes that a single asthma educator could serve additional counties, allowing provision of services to a greater number of individuals and focusing on those with greatest need. The Department proposes extending the program to serve Central LHD and the Fee For Service counties within Southwest LHD in order to increase the referral pool and focus on the highest of utilizers. The Department believes that this can be accomplished within the existing funding.

## Appendix A - Success Stories & Testimonials

### Success Stories

- An adult was referred to the UAHVP because in the past 12 months, he had visited the emergency department twice for asthma. At visit 1, he said he wasn't taking one of his control medications because he didn't want to get thrush. He completed all three visits. By visit 3, the client began taking both control medications every day, reporting "I was afraid to take my controller medication because I didn't want to get thrush. When I found out I could just take a liquid medication to get rid of it, I am now taking it at night." His asthma control test score improved from 14 at visit 1 (uncontrolled) to 20 at the 6-month follow-up (controlled). At the 6-month follow-up, he reported that he had not had to visit the emergency room for asthma.
- A child was referred to the UAHVP because in the past 12 months, they had 2 unscheduled doctor visits due to asthma. At visit 1, they had not been prescribed a control medication. During the program, they were able to visit their doctor and get a control medication prescribed, which the child started taking 7 days per week. Their asthma control test score improved from 16 at visit 1 (uncontrolled), to 21 at visit three (controlled). The parent reported, "We now know how important our control medication is to free up his life and activities."
- An adult was referred to the UAHVP because in the past 12 months, she had visited the emergency department three times, received an oral steroid six times, and had five urgent care visits as a result of her uncontrolled asthma. At visit 1, she reported being unable to complete household tasks and chores due to her asthma. She had been prescribed a control medication, but had confusion about her inhalers and wasn't taking her medication as prescribed. She completed all three home visits and accomplished the goals of getting an asthma action plan filled out by the doctor, getting an inspection done for mold, and taking her medications as prescribed. She was referred to numerous community resources to help address social determinants of health including the Tobacco Quit Line (for her father and husband), Food Bank, and Utility Assistance Program. After completing the program, she reported the program improved her life by "refreshing my memory and giving me access to things I had wanted to ignore, like using my inhalers correctly and making an asthma action plan." She went from using her control medication zero times per week at intake, to using her controller medication seven days per week at visit three. She reported that once she started taking her inhalers correctly, her asthma symptoms improved. Her asthma control test score increased from 14 at intake (uncontrolled) to 20 at visit three (controlled).

- A child was referred to the UAHVP because they had been to urgent care for asthma in the past 12 months. At visit 1, the child had an asthma control test score of ten, indicating poorly controlled asthma. The child was not on an asthma control medication. After visit one, the mother set a goal to visit the doctor and ask about control medications. By visit three, the child had been prescribed Flovent and was taking it seven days per week. At visit three, the asthma control test score had increased to 22. The mother reported, “Learning about inhalers has helped my son so much. These visits improved my son’s quality of life, he is breathing so much better. I can’t imagine where we would be without this.”
- An adult was referred to the UAHVP because they had been to the emergency department once and had three oral steroids in the past 12 months. This individual had been prescribed a control medication, but was taking it infrequently and had trouble affording the medication. They were referred to resources to address social determinants of health including the Food Bank and prescription assistance. Goals set during visits included taking medications as prescribed and dusting and vacuuming more often. At visit one, this individual’s asthma control test score was 17. This increased to 21 at visit three, and 23 at a one-month follow-up after visit three. The individual reported, “This program helped me have a lot more knowledge about how to keep my asthma under control. My asthma action plan has helped me a lot. This program really helped me control my asthma now. Thank you for this help.”
- A child was referred to the UAHVP because they had over six urgent care or unscheduled doctor visits in the past 12 months. At visit one, the child had an asthma control test score of 15 and was not taking a control medication. Goals set during the program included starting a control medication and making sure stuffed animals in the child’s room are cleaned regularly. Referrals to community resources made during the program included Southeastern Utah Association of Local Governments for rent assistance and Rural Online Training Courses through Utah State University to increase skill development and job opportunities for family members. By visit three, the child had visited their doctor and started taking a control medication seven days per week. The child’s asthma control test score increased to 21 by the end of the program. The parent reported, “It’s been a big difference. She is doing so much better with her asthma symptoms.”

**Testimonials**

The UAHVP helps participants breathe better so they don’t miss important things like school and work. It also helps them spend more time with their kids, exercise, and do the things they love. Here are some testimonials from UAHVP participants:

- “I liked being able to have someone who is knowledgeable to talk to and ask questions because my doctor doesn't always have enough time to do that.”
- “It has given me access to things I just wanted to ignore, like using my inhalers correctly and making an asthma action plan.”
- “Yes. It kept me well and more which was always fun for the kids.”
- ”It is easier to ride my bike. I don't wake up as much during the night.**”**