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## E-Cigarette and Vape Prevention in Rural Southeast Utah: Outcomes of Teacher Education

Christina Pay  
*Utah State University*, [christina.pay@usu.edu](mailto:christina.pay@usu.edu)

Jenna Hawks  
*Utah State University*, [jenna.hawks@usu.edu](mailto:jenna.hawks@usu.edu)

Jordyn Oman

Cris Meier  
*Utah State University*, [cris.meier@usu.edu](mailto:cris.meier@usu.edu)

Ashley Yaughner  
*Utah State University*, [ashley.yaughner@usu.edu](mailto:ashley.yaughner@usu.edu)

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## **E-Cigarette and Vape Prevention in Rural Southeast Utah: Outcomes of Teacher Education**

Christina Pay, Jenna Hawks, Jordyn Oman, Cris Meier & Ashley Yaughter

### **Abstract**

*“Be Epic” is a multi-component health and wellness program on vape prevention in rural Southeast Utah that targets youth grades 5–12, teachers, and parents. The teacher component included a one-time education session that taught teachers the basics of the “CATCH my Breath” curriculum. Results of a short-term outcome evaluation showed an increase in teachers’ knowledge and confidence related to e-cigarette education.*

### **Introduction**

E-cigarette usage has increased nationally among students, leading to the Surgeon General to declare e-cigarette usage a youth epidemic (U.S. Department of Health and Human Services [HHS], 2016). Southeast rural Utah has the highest rates of e-cigarette use among youth in the state (Utah Department of Human Services [DHS], 2019). With vague information, misconceptions, and few, if any, prevention programs already in place, “*BE EPICE & Grand*” (i.e., Broad Extension of E-cigarette Prevention in Carbon, Emery, & Grand) implemented an educational program in communities to combat initiation and use of e-cigarettes among youth. The name of the program was shortened to “*Be Epic*.”

According to the Prevention Needs Assessment Survey, 21% of students of grades 8, 10, and 12 in the Southeast Utah Health Department reported use of e-cigarettes in 2019 (Utah Department of Health [UDOH], 2020). While results indicated an increase in youth’s use of e-cigarettes as they progress to higher grade levels, there is also an increase in the usage of e-cigarette among youth in lower grades. In the Four Corners District (i.e., Carbon, Emery, & Grand), there was an increase in e-cigarette use among 6th graders from 0.4% to 4.2% over a four-year period (2015-2019; Bach-Harrison, 2020). The prevalence of e-cigarette threatens the progress made to decrease youth tobacco use. *Be Epic* acts to prevent the initiation of e-cigarette use through multiple evidence-based components, including teacher-centered education.

### **Response and Target Audience**

Given the need for e-cigarette prevention programming in rural Southeast Utah, a team at Utah State University (USU) Extension created and implemented the *Be Epic* program in November 2020. The program was funded by Southeastern Utah Health Department and adopted the “*CATCH My Breath*” program curriculum (see <https://catchinfo.org>). Two local Health and Wellness Prevention Coordinators (1 in Carbon and Emery, and 1 in Grand) were hired, trained, and certified on the *CATCH My Breath* curriculum.

The Health and Wellness Prevention Coordinators facilitated a 1.5-hour training for teachers of grades 5 to 12 and school staff. The training provided up-to-date information about vaping (e.g., identifying vape devices, common hiding places for these devices, and vape ingredients), health

effects of e-cigarettes, and relevant statistics on the prevalence of youth vaping. Teachers were introduced to the *CATCH My Breath* curriculum, which is available at no cost for use in their classrooms. The teacher training component of *Be Epic* was delivered to nine schools across the three-county program area. Across all sites, 42 teachers attended the 1.5-hour training ( $n = 42$ ). Seven (7) trainings were delivered virtually, and one (1) school requested in-person delivery. The teacher training component was designed to increase teachers' involvement and awareness on vaping, and to decrease the risk of youth e-cigarette initiation at school.

### Outcomes and Impact

Pre- and post-surveys were conducted to examine changes in teacher knowledge and confidence in delivering the *CATCH My Breath* lessons about vaping to students. Participating teachers most often taught at the elementary school-level (61.5%) and 34% taught more than one subject. The majority of participants were female (87.2%) and identified as white (92.3%). As shown in Table 1, results of paired sample *t*-tests showed participants ( $n = 38$ ) had statistically significant increases in their knowledge of the health risks associated with e-cigarettes and confidence to address e-cigarettes in the classroom with students.

*Table 1. Results of the paired sample t-tests of pre- and post-surveys for teachers (n = 38).*

	Mean <sup>PRE</sup>	Mean <sup>POST</sup>	<i>t</i>
I know the basics of what e-cigarettes are and how they work.	3.18	4.47	-6.47**
I know the health risks associated with youth vaping.	3.68	4.5	-5.11*
I know the common misconceptions that minimize the impacts of youth vaping.	3.05	4.39	-7.08**
I feel confident in my ability to discuss tobacco and vaping specific information with my students.	2.79	4.37	-8.61**
I feel confident that I can incorporate information and discussions about tobacco and vaping into my class.	2.97	4.47	-7.99**
I feel confident in my ability to discuss with students how to decline tobacco or vaping from peers.	3.39	4.45	-6.41**
I feel confident in my ability to model healthy behaviors with students.	4.26	4.65	-2.84*
I know where to find resources to help me incorporate information about tobacco and vaping into my class content.	2.82	4.53	-9.69**

Note. \* $p < 0.01$ , \*\* $p < 0.001$

Teachers reported a high level of satisfaction with the training ( $M = 4.20$  out of 5). Responses to two open-ended questions indicated the training content provided new and interesting information, and the presentation itself was well-developed and professionally presented. When

asked what could be improved, some teachers stated they did not enjoy the scripted nature of the presentation, and would prefer in-person option.

### Public Value/Next Steps

The *Be Epic* program improved teachers' knowledge of e-cigarettes and their confidence to teach students using the *CATCH My Breath* curriculum; teachers were better prepared to intervene with youth to prevent initiation of e-cigarette use after completing the *Be Epic* training. While short-term outcomes were achieved as expected, medium-term outcomes are unknown due to a low response rate to the three-month follow-up survey ( $n = 3$ ). This limits the team's ability to understand how teachers implemented the *CATCH My Breath* curriculum in the classroom.

The *Be Epic* program has received continuing support by the Southeastern Utah Health Department. Using evaluation results, the program team at USU Extension seeks to modify program components to improve program delivery in 2021. For example, *Be Epic* plans to broaden the teacher component by adding another session to reorient teachers to the curriculum. The program team also plans to provide quarterly in-service opportunities to teachers to improve implementation of the *CATCH My Breath* curriculum in the classroom. The first iteration of *Be Epic* was an effective educational intervention that other health districts can adopt to strengthen their youth vape prevention efforts.

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