Background

Since 2020, The University of North Carolina at Pembroke (UNCP) has served as the evaluator for the NC CHW Standardized Core Competency Training facilitated by NC community colleges. In 2022, UNCP was asked to also evaluate CHW specialty training created and facilitated by the Mountain Area Health Education Center (MAHEC) and partners. CHW specialty training is offered as a series of online self-paced sources. MAHEC developed pre and post-tests based on course content to assess knowledge outcomes. Specialty training courses were launched in late August 2022.

Number of Respondents Included in Analysis
Introduction to Health and Wellness Coaching for Community Health Workers
Course #68929 n=371
     Prior to Dec 2022 n=287
     December 2022-February 2023 n=24
     March-May 2023 n=38
     June-August 2023 n=22

Introduction to Motivational Interviewing for Community Health Workers
Course #68932 n=236
     Prior to Dec 2022 n=142
     December 2022-February 2023 n=32
     March-May 2023 n=35
     June-August 2023 n=27

Motivational Interviewing Conversations: Clients with Common Health Conditions
Course #68947 n=175
     Prior to Dec 2022 n=71
     December 2022-February 2023 n=33
     March-May 2023 n=41
     June-August 2023 n=30

Methods

Learners who register for CHW specialty training are prompted to complete online pre and post-tests as part of the course. Deidentified pretest and posttest responses from specialty trainings 68947, 68929, and 68932 were received by the UNCP study team from the MAHEC staff between. Data collected was from pre and post-tests completed between August of 2022 and August of 2023. The data collected was separated and analyzed based on the date of the pretest into the following groups: August 2022-November 2022, December 2022-February 2023, March 2023-May 2023, and June 2023-August 2023. These groups align with CDC grant reporting quarters.

Responses were sorted into pre and post-test pairs by a unique respondent identification number assigned automatically by the MAHEC learning management system. Then, each test was scored. Each correct response received one point. As several questions required multiple correct responses to receive full credit, partially correct responses received 0.5 points.
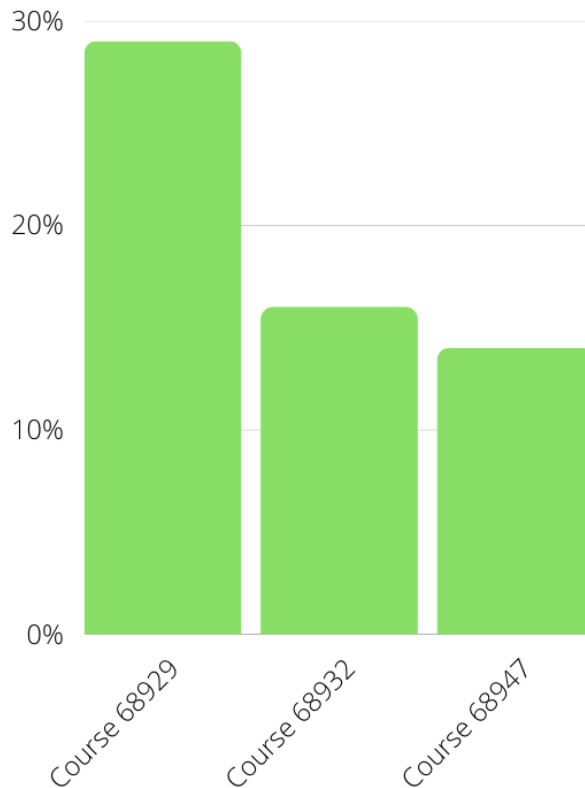
Responses that were incomplete, whether a pretest result without an accompanying posttest or a posttest without an accompanying pretest, were not included in the analysis. Pre- or posttests that were less than 50% complete were removed from the analysis. Pairs that had an individual rate of change of 50% (gain or loss) or greater were considered outliers and excluded from the overall rate of change calculation.

Respondents were separated between individuals who self-identified as Community Health Workers (CHWs) and those who did not self-identify as CHWs. Those who did not identify as a CHW were excluded from the data analysis. Each pair of pretests and posttests were compared to notate the percentage of change between the pretest and the posttest scores. Results were reviewed multiple times to ensure accuracy.

Results

Overall % of Knowledge Change
Specialty Training Modules Aug 2022-Aug 2023

Introduction to Health and Wellness Coaching for Community Health Workers
In Course 68929, CHWs experienced an overall 29% increase in knowledge between August 2022 and August 2023. Overall, course 68929 experienced the highest knowledge gain amongst the three courses.

Mean scores for pre and posttests in the table below are represented using a score out of a possible 100%.

Pre and post-test t-test paired for course 68929

	PreTest	PostTest
N	371	371
Mean	70.47	90.81
Standard Deviation	15.07	8.25
P value (two-tailed)	<0.0001	
t score	24.6646	
df	370	

The null hypothesis is rejected. The difference in means is highly statistically significant.

Introduction to Motivational Interviewing for Community Health Workers
In Course 68932, CHWs experienced a 16% increase in knowledge between August 2022 and August 2023. Post-test scores for this course were higher when compared to the other two courses.

Mean scores for pre and posttests in the table below are represented using a score out of a possible 100%.

Pre and post-test t-test paired for course 68932

	PreTest	PostTest
N	236	236
Mean	80.87	94.07
Standard Deviation	15.76	7.46
P value (two-tailed)	<0.0001	
t score	12.9618	
df	235	

The null hypothesis is rejected. The difference in means is highly statistically significant.

<u>Motivational Interviewing Conversations: Clients with Common Health Conditions</u>
In Course 68947, CHWs experienced a 14% knowledge between August of 2022 and August of 2023. 53 CHWS (30%) had a 0% rate of change between the pre- and posttest. Pre-test scores for this course were higher when compared to the other two courses.

Mean scores for pre and posttests in the table below are represented using a score out of a possible 100%.

Pre and post-test t-test paired

	PreTest	PostTest
N	175	175
Mean	82.11	93.37
Standard Deviation	13.24	7.55
P value (two-tailed)	<0.0001	
t score	10.1408	
df	174	

The null hypothesis is rejected. The difference in means is highly statistically significant.