Public Health Summer Academy

Evidence-based Public Health Training

4 Year Evaluation (2012, 2013, 2014, 2015)

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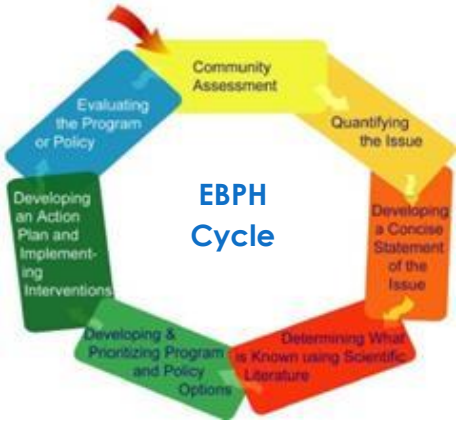
Executive Summary

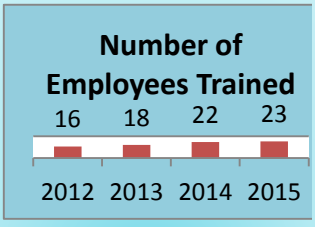
Since 2012, 79 East Tennessee Regional Health Office (ETR) employees representing the Regional Office (RO) and 12 of the15 ETR counties have participated in an annual Public Health Summer Academy (PHSA). The PHSA involves 20 hours of educational sessions (Monday-Friday from 8 a.m. to noon) in basic public health knowledge and skills with an **Evidence-Based Public Health (EBPH) framework.**



Credit: Dr. Ross Brownson

Improvements in 2015

- *Increased enrollment*



- *Added Primary Prevention Initiative (PPI)examples into curriculum*
- *Encouraged PPI proposals or oral presentations as post-activity*
- *Used circular tables to facilitate small group interaction*

Each year, attendance has increased. In 2015, twenty-three employees representing eight counties and the RO participated in the PHSA.

The PHSA was collaboratively planned by employees from ETR and the University of Tennessee (UT) Department of Public Health (DPH). Dr. Paul Erwin, UT DPH Professor and Head, a former ETR Regional Director, taught the introduction and wrap-up sessions, as well as facilitated daily discussions highlighting the relevance of each day's topic to ETR. Three UT DPH faculty taught the remaining sessions.

"The PHSA solidified my decision to return to school for my MPH." -2015 participant

PHSA is affordable. The total cost has ranged from $2,629 - $3,444. In its inaugural year, the per-person cost of PHSA was $162; since adding a Friday luncheon in 2013, the average cost per participant has been $172. PHSA has been provided at no cost to participants, who complete the series during business hours. Funding has been provided by a sub-award to the UT DPH from East Tennessee State University's Public Health Training Center (2012-2013) and directly from the UT DPH (2014-2015).

Public Health Summer Academy Participants, 2012-2015

2012 2013 2014 2015

Participant Demographics. Of the 79 public health employees who completed PHSA in 2012-2015, more than a third (29, 37%) have been employed 2 years or less, yet nearly one quarter (19, 24%) have 12+ years of employment at ETR. (Figure 1) Most participants (57, 72%) work in tier 1 positions, defined as those who carry out day-to-day tasks. Managers (tier 2) represented 22% (17) and leadership (tier 3) comprised 6% (5) of participants. (Figure 2) Over half of participants to-date (44, 51%) hold an Associates/Bachelor's degree. (Figure 3)

The variety of prior experience, job type, and education of participants has added depth and breadth to discussions and provided networking opportunities. This variety also reflects the wide applicability and appeal of PHSA. Serving a cross-section of the ETR employee base has also resulted in building an understanding of and appreciation for EBPH across all levels of the organization, as opposed to just the upper tiers.

Figure 1: Years of Employment at ETR, 2012-2015

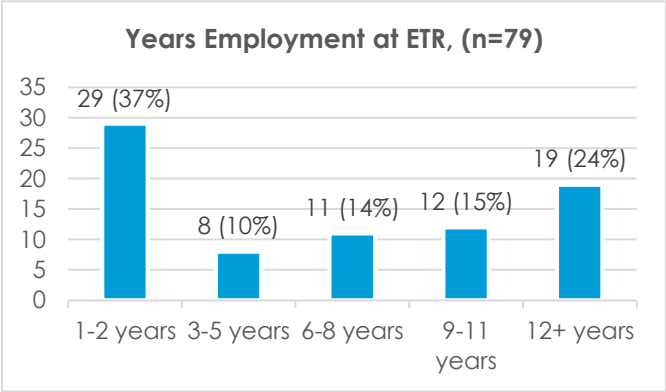


Figure 2: Job Type, 2012-2015

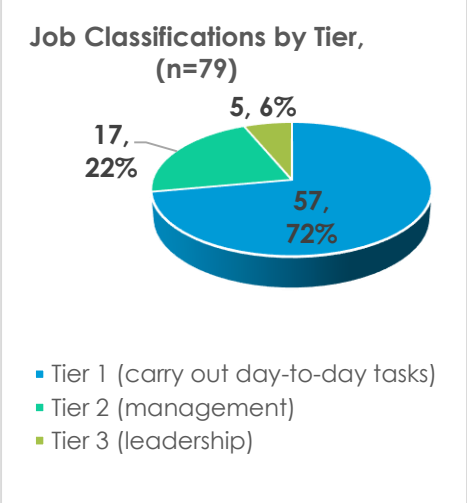
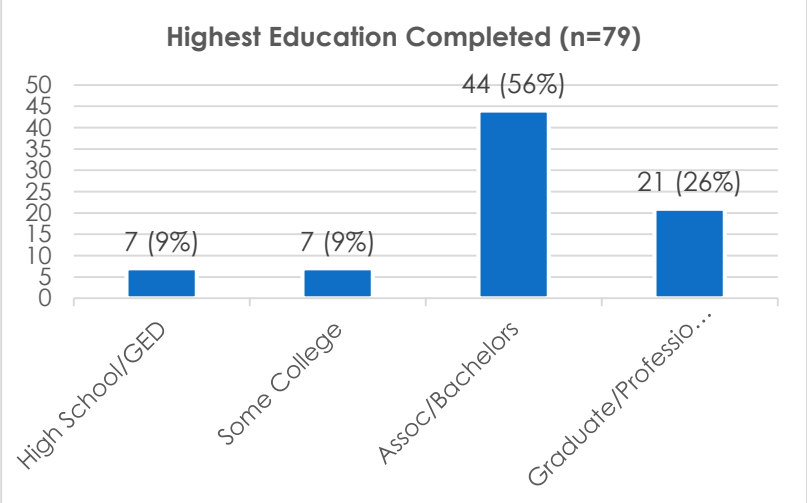


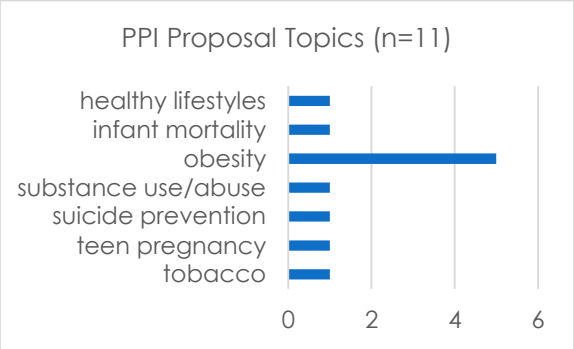
Figure 3: Formal Education, 2012-2015



Evaluation. Feedback has been highly positive each year (e.g., 100% reported learning something at every session). Participants completed a pre & post competency self-

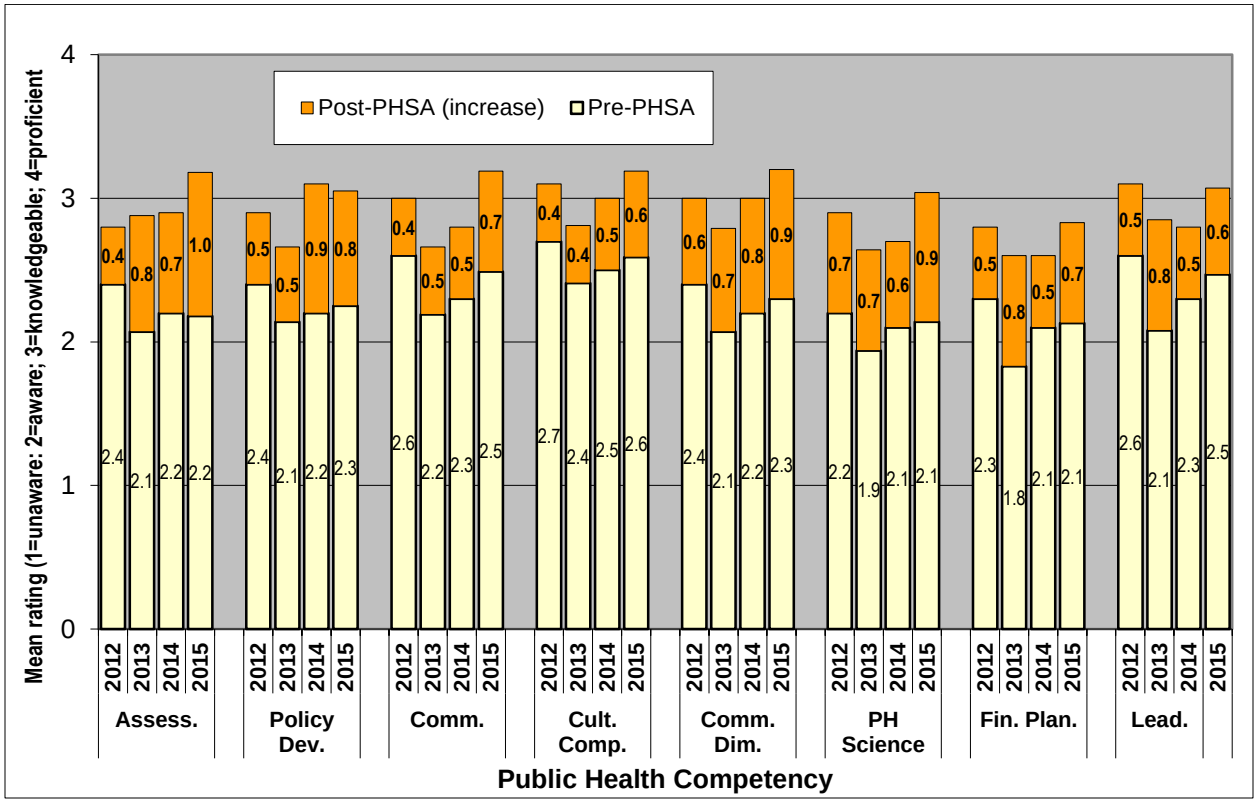
assessment, and daily session evaluations. During the initial three years of PHSA participants wrote a reflection paper following the experience. In 2015, in lieu of a reflection paper, participants were given the opportunity to give a formal presentation to coworkers on the experience or develop a Primary Prevention Initiative (PPI) proposal as a culminating assignment; half of the 2015 participants chose to develop PPI proposals, with the majority focusing on obesity. (Figure 4) **The large number of PPI proposals developed is indicative of the applicability of the skills fostered by PHSA participation.**

Figure 4: PPI Topics Selected in 2015



Pre & Post Competency Self-Assessments showed the average rating for all competency areas increased in 2012 (range: 0.4-0.7 points), 2013 (range: 0.4-0.8 points), 2014 (range: 0.5-0.9 points), and in 2015 (range: 0.6 – 1.0 points) indicating that **every class moved from "aware" toward "knowledgeable" and in some cases "proficient" following their participation**. With the exception of financial planning (which is only briefly touched on in PHSA), the 2015 group average was above "knowledgeable" (above 3) in all categories following PHSA completion. (Figure 5)

Figure 5. Average Rating for Pre and Post Competency Areas, 2012-2015



Favorite Aspects. Participants in all years have liked the diversity of instructors and participants, which enhanced the learning experience as they gained an understanding of each other's roles and perspectives. In 2015, the most popular aspect was the quality of instructors, followed by the applicability of the EBPH cycle to improve their job. Group activities and pleasant facilities were also cited by a number of 2015 participants.

> "I liked the ability for different levels of experience and knowledge to be represented in the group. This made it more applicable to the teams that we will be doing PPI with in our specific work locations." -2015 participant

Future Directions. The UT DPH will not offer PHSA in 2016 due to providing a similar training in collaboration with the TDH for Middle, East, and West TN employees but intends to resume the annual PHSA for ETR employees in 2017.

To learn more about PHSA, visit http://publichealth.utk.edu/summeracademy.html or contact Julie Grubaugh at jgrubaugh@utk.edu or 865-974-9277.

The following report describes the PHSA 2012, 2013, 2014, and 2015:*

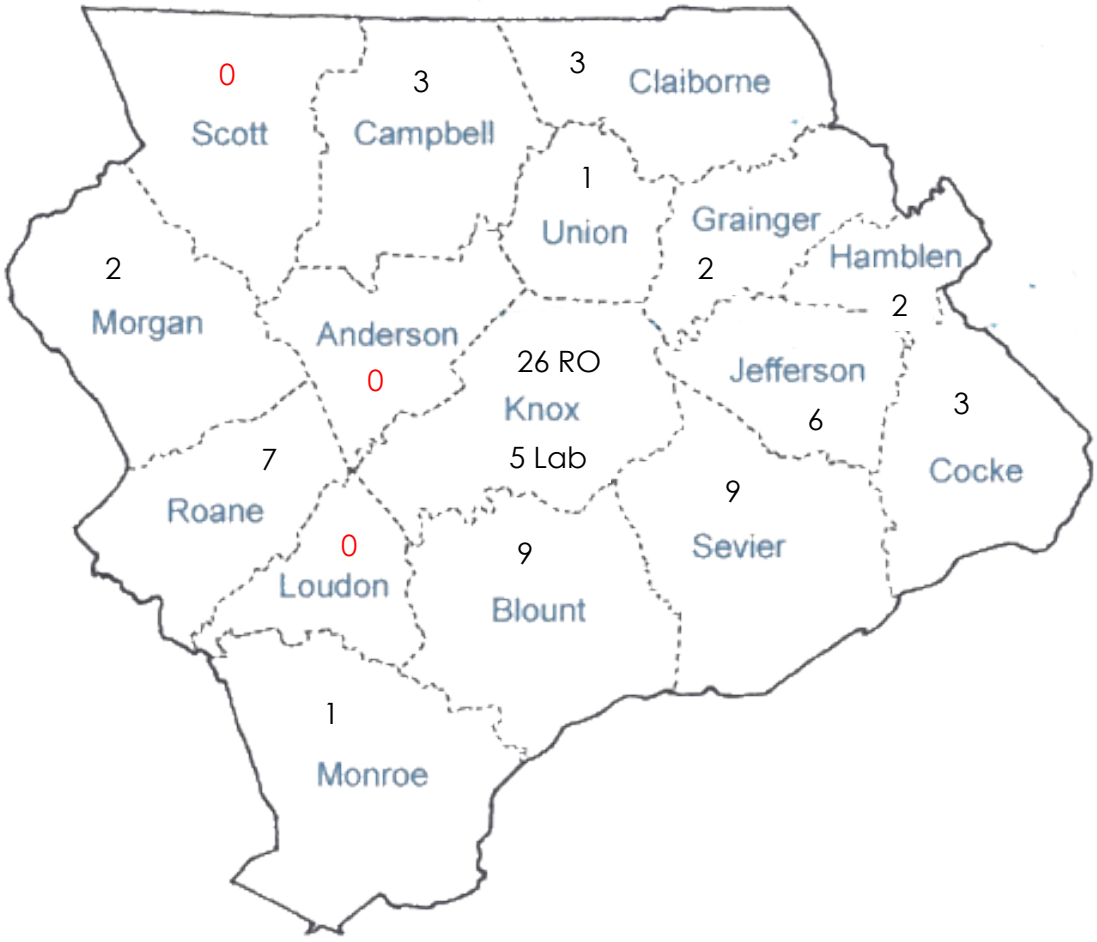
Round tables, an improvement in 2015, facilitated small group work.

***** This report provides detailed evaluation data for 2015 and summary data for previous years (2012-2014). Detailed reports for previous years may be requested by emailing Julie Grubaugh at jgrubaugh@utk.edu.

I. Participant Demographics, 2012, 2013, 2014, and 2015.

A total of 79 employees (89% female, 11% male) have participated in the training, with an increase in enrollment each year. Enrollment has represented 12 of the 15 ETR counties (80%) as well as the RO and the Knoxville Regional Lab. The 3 counties not yet represented include Anderson, Loudon, and Scott.

Figure 6. Total Number of PHSA Participants by County, 2012-2015.



Participants' job titles span all levels of the organization ranging from County Director to Public Health Office Assistant. Both clinical and non-clinical positions have been included. The most common job title among participants has been Office Assistant (11/79 or 14%). At least one office supervisor has attended each year. (Tables 1, 2).

Table 1. Detailed Participant Demographics by Year, 2012-2015

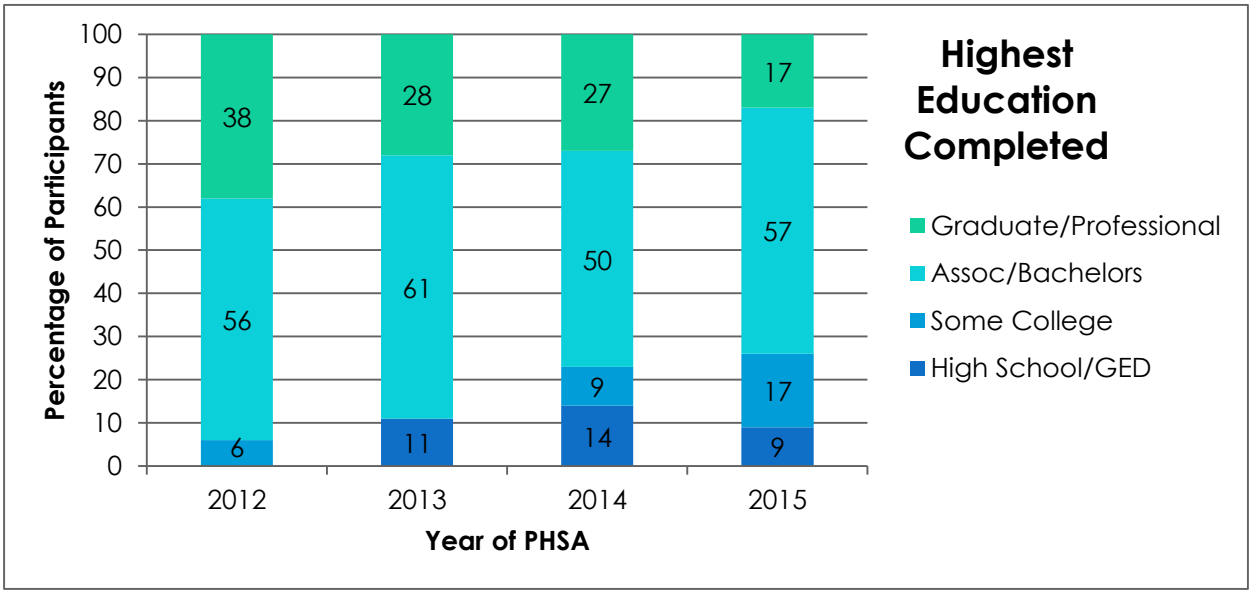
2012	2013	2014	2015
16 ETR employees • 13 females (81%) • 3 males (19%)	18 ETR employees • 16 females (84%) • 2 males (11%) 1 additional person enrolled but withdrew due to illness	22 employees (19 ETR + 3 Lab) • 20 females (91%) • 2 males (9%) 2 male interns audited 3 additional people enrolled but withdrew due to work or personal conflicts	23 employees (21 ETR + 2 Lab) • 23 females (100%) 1 female intern audited 1 additional person enrolled but withdrew due to work conflicts
6 counties plus RO Blount (1); Claiborne (2); Jefferson (1); Sevier (1); Union (1); Roane (4); Regional Office (6)	5 counties plus RO Blount (5); Jefferson (3); Monroe (1); Roane (1); Sevier (2); Regional Office (6)	8 counties plus RO & Lab Blount (1*); Campbell* (2); Cocke (1); Grainger (2); Hamblen (1); Jefferson (1); Morgan (2); Sevier (1); Regional Office (8); Knoxville Regional Lab (3)	8 counties plus RO & Lab Blount (2); Campbell (1); Claiborne (1); Cocke (2); Regional Office (6); Hamblen (1); Jefferson (1); Knoxville Regional Lab (2); Roane (2); Sevier (5)
Job Titles: • County Director • Coordinator (2) (Primary Care, Regional Program) • Environmental Epidemiologist • Nurse Practitioner • Nursing Supervisor (2) • Nutrition Educator • Office Supervisor (2) • Pharmacist • Public Health Representative (2) • Regional Health Officer • Regional Program Director • Social Counselor	Job Titles: • Accountant • Assistant Nursing Supervisor • Clerical Consultant • Dentist • Environmental Health Specialist • Nurse Practitioner (2) • Nutrition Educator • Office Assistant or Administrative Assistant(4) • Office Supervisor • Registered Nurse (5)	Job Titles: • County Director (2) • Microbiologist (3) • Nursing Supervisor (4) • Nutritionist (3) • Office Assistant or Administrative Assistant (3) • Office Supervisor • Public Health Representative • Program Director (3) • Registered Nurse (2)	Job Titles: • Assistant Director • Breastfeeding Peer Counselor • Coordinator (2) • Health Educator (2) • LPN • Microbiologist • Nurse's Assistant (2) • Nutritionist (2) • Office assistant (3) • Office supervisor • Program manager • Registered Nurse (4) • Social Counselor (2)

Table 2. List of Participant Job Titles, 2012-2015

Tier	Job Title	Number	Percentage
1	Registered Nurse	11	14%
1	Office assistant	10	13%
2	Nursing Supervisor	6	8%
1	Nutritionist	5	6%
2	Office Supervisor	5	6%
1	Coordinator	4	5%
1	Microbiologist	4	5%
3	County Director	3	4%
1	Nurse Practitioner	3	4%
1	Nurse's Assistant/LPN	3	4%
2	Program Director	3	4%
1	Public Health Representative	3	4%
1	Social Counselor	3	4%
1	Health Educator	2	3%
1	Nutrition Educator	2	3%
1	Accountant	1	1%
2	Assistant Director	1	1%
2	Assistant Nursing Supervisor	1	1%
1	Breastfeeding Peer Counselor	1	1%
1	Clerical Consultant	1	1%
1	Dentist	1	1%
1	Environmental Epidemiologist	1	1%
1	Environmental Health Specialist	1	1%
1	Pharmacist	1	1%
2	Program manager	1	1%
3	Regional Health Officer	1	1%
3	Regional Program Director	1	1%
	Total	**79**	**100%**

Education. PHSA is open to employees with all levels of education. Participants have included relatively more people with advanced education and degrees compared to the overall TDH workforce. The TDH's Workforce Assessment Survey (2012) found that less than 14% of TDH employees had graduate or professional degrees, while 26% of PHSA participants during the four-year period had advanced degrees. Figure 3 TDH reported more than 20% of the state health department workforce has a high school diploma or GED (as their highest level of education), compared to PHSA's much lower 9% of participants to-date. The majority of participants in all four years (56%, 61%, 50%, and 57%, respectively) had an Associate's/Bachelor's degree. There has been a downward trend in the percent of participants with graduate/professional degrees (38%, 28%, 27%, and 17%, respectively). In contrast, over time there has been a general increase in the number of people with high school/GED (none, 11%, 14%, and 9%, respectively).

Figure 7. Formal Education of PHSA Participants, 2012-2015



Commentary. The trend toward more participants with less completed formal education makes sense when considering the TDH workforce composition. Over time, as more people participate and the sample becomes more representative, we would expect to see increasing numbers of people with less formal education. While the inaugural class was the most educated (likely the least intimidated by the academic approach), we believe the changing demographic means word is spreading that PHSA is indeed open and accessible to anyone. Even so, in 2014, several participants reflected they were initially intimidated, but after arriving felt at ease. Further, one 2014 participant

> "I liked that it was offered to all employees and not just certain people"
> -2015 participant

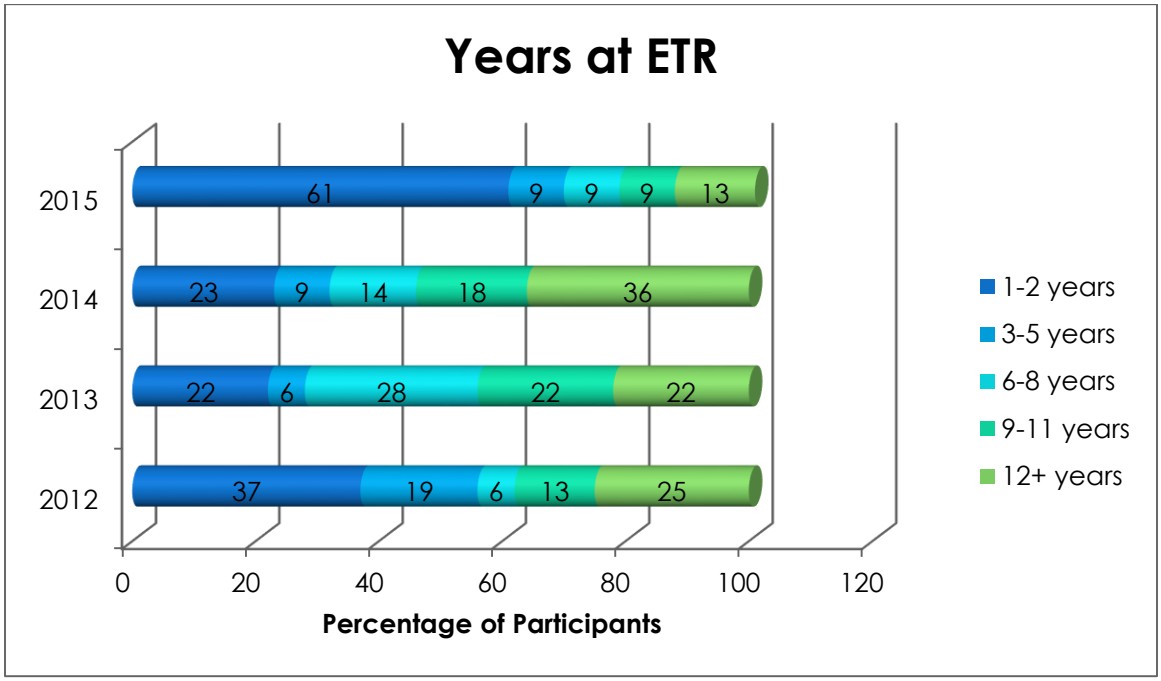
who had attended college stated: "I must admit, having been out of college for over 20 years, I was very anxious about attending the Academy but felt very relaxed and comfortable during the class."

> "There were other "geeky" things that I also enjoyed such as being able to attend at the University of Tennessee and feeling like a student."
> -2015 participant

We hope that everyone will feel comfortable applying for PHSA, without regard to their level of formal education.

***Work experience*.** While the 2012 group had the most formal education, the 2013 and 2014 groups had more years of experience in public health, and the 2015 cohort had the least years of experience. (Figures 7 & 8) The percentage of employees with 9 or more years at ETR increased every year during the first 3 years (38%, 44%, and 54%, respectively) but dropped sharply in the fourth year (22%). (Figure 3) Conversely, in 2012, 37% were new employees at ETR (1-2 years), compared to 22% and 23% in 2013 and 2014, respectively. Most significantly, the number of new employees more than doubled in 2015 to 61%.

Figure 8. Work Experience of PHSA Participants, 2012-2015



Commentary. Having groups of participants with a wide range of years of employment at ETR has been a benefit because it provides for varying perspectives. In some cases, participants new to ETR brought many years' experience from other organizations, while others were relatively new to the workforce. The sharp increase in numbers of new employees in 2015 (61%) correlates to an eligibility change, wherein, at the request of the ETR Director, participants with less than 1 year of employment were allowed to apply, whereas in prior years employees were required to have at least 1 year of employment with ETR.

> "I liked the ability for different health departments and different levels of experience and knowledge to be represented in the group. This made it more applicable to the teams that we will be doing PPI with in our specific work locations."
>
> -2015 participant

Reasons participants enrolled. In all four years, the most common reason people reported having enrolled was to increase public health knowledge and skills. During the first three years, 19-21% of participants stated on their application that they were considering an MPH or related degree, compared to 57% of 2015 participants. A small number in 2013 and 2014 reported having enrolled due to hearing positive comments from prior years' participants.

II. Pre and Post Self-assessed Public Health Competencies

Participants completed a pre and post Competency Self-Assessment, which was designed by Janet Place, MPH, North Carolina Public Health Academy, University of North Carolina, modified by the Public Health Foundation, and provided by the Council on Linkages between Academia and Public Health Practice. The Assessment includes 8 key dimensions of PH practice and may be accessed here: http://www.phf.org/resourcestools/Documents/Competency_Assessment_Tier1_2012Jan.pdf.

Purpose. The assessment served two purposes: 1) *Applicant screening*. The PHSA did not require a specific level of previous educational attainment; however, in order to be sure those who did apply were genuinely interested, the tool was required as part of the application with the belief that since it took effort and time (~20 minutes), only those who were truly interested would complete it; and 2) *Evaluation*. Conducting pre and

post assessments allowed change in self-reported competencies to be measured, which is a key indicator of PHSA success.

Method. Participants in 2012 were asked to complete the assessment as a fillable pdf, save it, and submit it via email. However, many said the assessment was intimidating and a number of individuals had trouble using the computer to fill out the pdf document. Additionally, the paper-based process made data compilation and analysis cumbersome. The assessment was continued for the reasons described above, but from 2013 onward it was administered through Survey Monkey, making it easier to complete and submit. No participants reported having trouble completing the assessment via Survey Monkey. The web-based self-assessment also made data analysis more efficient for program administrators.

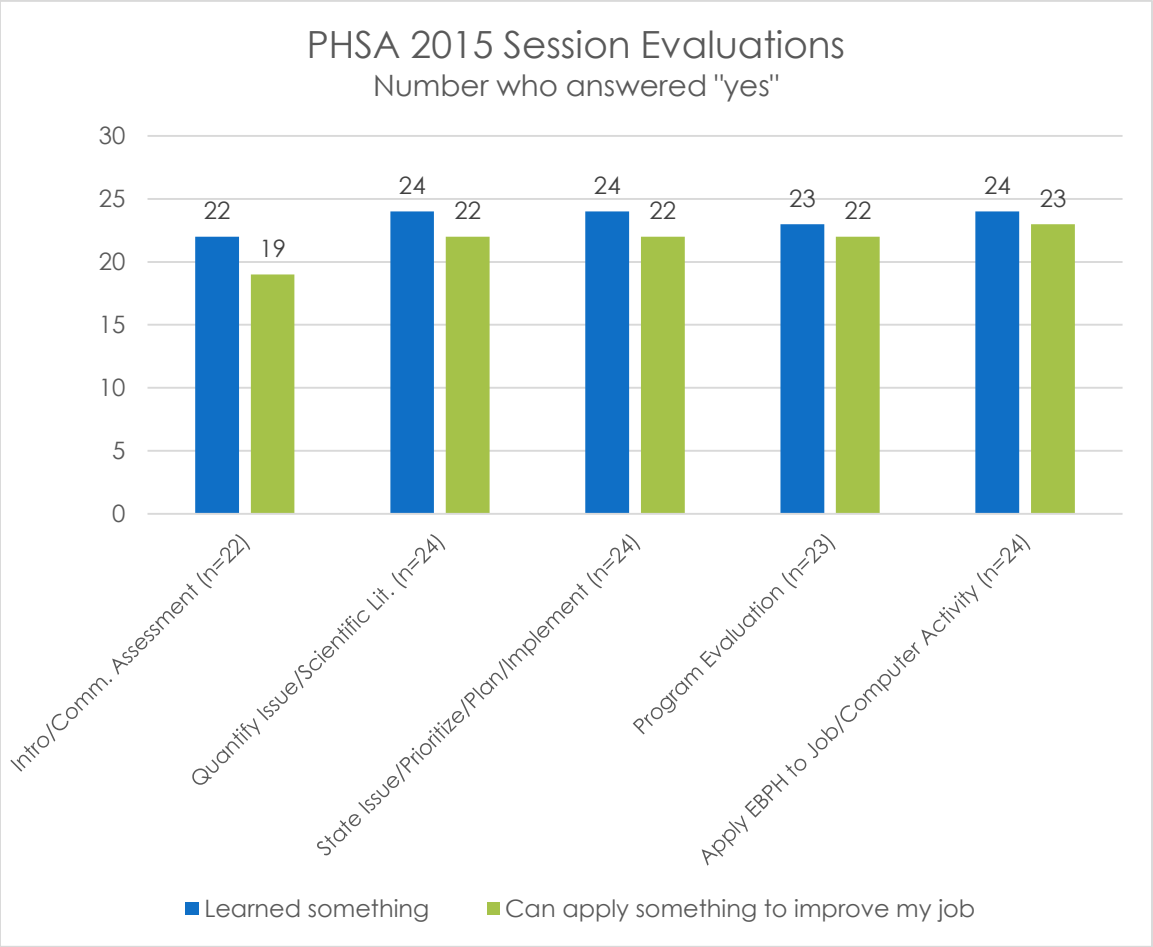
Key Findings. Based on the ratings designated by the competency assessment (1=None/Unaware, 2=Aware, 3=Knowledgeable, 4=Proficient), in all four years the group average increased from "aware" toward "knowledgeable" for all competency areas. In 2012 the average rating in each competency area increased by 0.4-0.7 points compared to increases of 0.4-0.8 points in 2013, 0.5-0.9 points in 2014, and 0.6-1.0 points in 2015. While the pre-assessment scores for all competency areas were highest in 2012 (which is not surprising since everyone in the 2012 group had at least some college education and also had the highest percentage of graduate/professional degree holders (Figure 8, page 8), the amount of increase – the key indicator used to measure change in knowledge and skills – was consistent across years (0.4 mean increase).

Commentary. Importantly, every class (2012-2015) expressed an increase in self-reported competencies after completing PHSA. (Figure 5, page 3) While it is not realistic for participants to become proficient in a competency area solely due to a week-long training, tailored workforce development should help employees move from a level of knowledgeability toward proficiency, particularly in competency areas related to their position's responsibilities.

III. Participant Evaluation

Daily session evaluation in 2015 indicated that 100% percent of the respondents reported that they learned something each day. Additionally, most people reported they could apply something they learned each day to their job, with only one to three people each day saying they could not or were not sure if they could. (Figure 9)

Figure 9. Daily Session Evaluations, 2015



Written evaluation conducted on the last day of PHSA in 2012, 2013, 2014, and 2015 has consistently been very positive. In all four years, with the exception of 3 who were neutral, everyone agreed or strongly agreed that PHSA was a good use of time; 52-80% of participants each year have said PHSA stimulated their interests in pursuing additional course work or a degree in public health; with the exception of one person who was neutral, all participants reported that they would recommend PHSA to a colleague. (Table 3)

Other suggestions from 2015 participants included: require PHSA for all employees; increase nontraditional learning opportunities at UT for employees through online classes and evening classes.

Table 3. Participant Evaluation Conducted on the Last Day of PHSA, 2012-2015*

		1- strongly disagree	2- disagree	3- neither agree/nor disagree	4- agree	5- strongly agree	Total
Overall, PHSA was a good use of my time.	**2012**	2**	0	0	4	10	16
	2013	0	0	0	0	17	17***
	2014	0	0	1	9	14	24
	2015	0	0	2	4	18	24

		Yes	**No**	**Maybe**	**Comments**
PHSA stimulated my interests in pursuing additional course work or a degree in public health.	**2012**	75% (12)	19% (3)	6% (1)	Will consider more seriously; May continue my education to a Master's.
	2013	76% (13)	18% (3)	6% (1)	I am thinking of getting my MPH. :-); not at this time; No - have already done coursework for Certificate in Healthcare Management
	2014	50% (12)	46% (11)	4% (1)	Yes coursework; Yes for certificate in food safety; No, although I would like to get my Master's in Education
	2015	67% (16)	13% (3)	21% (5)	Yes, Masters in Public Health; Yes but not sure what; More leaning towards MSW - but did stimulate interest in furthering my education; Courses perhaps but degree no; No, I am near retirement; No, currently enrolled in Masters in Education for Nursing; I hope to see more nontraditional class offerings from UTK in the future. i.e., online classes and classes beginning at 6 p.m. or later

		Yes	No	Maybe	Comments
I would recommend the PHSA to a colleague.	**2012**	100% (16)	0	0	Definitely
	2013	100% (17)	0	0	Definitely; Yes, I already have!
	2014	100% (24)	0	0	Yes, if more hands-on; Yes, I already have
	2015	96% (23)	0	4% (1)	Yes, already have!; I think this week should be a requirement for all full time employees who are planning a career in public health or an employee who had been there for X amount of years; yes, to those who need more info on research

*2014 evaluation data includes 2 student interns, and 2015 includes 1 intern.
**Most likely these 2 people in 2012 intended to select "5" for strongly agree since they answered "yes" to pursuing additional coursework and recommending to colleagues.
***One person did not fill out the survey in 2013.

Other Comments from 2015: I feel as though it was more focused on PPI than anything else; Thank you Dr. Erwin and Julie! You were very accommodating and made this PHSA available to full time employees who are recently full time.

Table 4. Detailed List of What 2015 Participants Will Apply to Their Jobs Based on Daily Session Evaluations

Example of what I can apply to improve the work that I do	**If I cannot apply, describe why**
Intro to EBPH/Community Assessment (Monday, Erwin & Meschke) • evidence based decision making • I can use qualitative data for why women breastfeed • how to know what approach to take • Reading and Interpreting Data (& collecting) • The differences in collecting data • I learned the diff. benefits of the different types of data collecting • PPI project development	• Possibly - will definitely look @ doing so in future • ? • uncertain at this point

• Application of data sets • Use of data to improve how I educate • Why PPI was developed and how we apply it to the public. • how to open my mind to see communities in a new way • using different ways to gather data for PPI projects in the future • How to determine a community assessment • collecting data • Narrowing target populations • think about being more efficient • How CHA can help develop a PPI • Think more in depth, and evaluate how I got the data needed. How to get data.	
Quantify the issue (Tuesday, Erwin & Terry) • better research skills • PPI project start points • Using websites for PPI • developing PPI's • Epi / Rates, Ratios, etc. • Looking up information / Data • statistics • Prevalence. Help me perceive information more clearly. • how to interpret data (prevalence / incidence) • Data gathering for a particular disease process and sub pop. • How to better evaluate charts and graphs. sources of studies to dig deeper • how to use databases like PubMed and look up guidelines pertaining to specific topics • Data collection / interp. • learning more about websites to use and statistic [sic] and how they are used • # of Breastfeeding mothers in Blount Co, and how our population compares to other counties • When preparing PPI plan, we can look at actual rates in our counties to figure out what should be priority • When doing PPI looking at all the numbers (rates) more in depth • Show rates of WIC participants • How to better read statistics	• In my daily job I do not do these things
State/prioritize/plan/implement (Wednesday, Erwin & Meschke) • Logic model for implementing PPI. • How to help create a model for a PPI • problem statement / logic model • Logic Model • New PPI development • develop PPI • Planning • How to develop a problem statement	

• Use Logic Models • Event Planning - especially for The Big Latch On, Breastfeeding classes and support groups • When presented w/ statistics I have a better understanding of how the [sic] conducted their research and [cannot read handwriting] • prioritize the planning of a project • Logic model - initiation of an action plan in comm. health. • Action plans • PPI • To think outside the box • prioritizing needs • learned real steps to create and plan PPI project • seeing options • Starting to learn how to go about setting up a PPI correctly • Action plans & Logic models prioritize/plan implement	
Program Evaluation (Thursday, Erwin and Jabson) • How to better evaluate programs • how to evaluate • Evaluation - Outcomes -> Intervention • How to develop measurable objectives • Types of evaluations and EBP • Learning how to create a logic model in detail. • How to evaluate the programs being implemented. • Evaluation of Program Trainings • Logic models • correct evaluation strategies • To know how to break the logics down to better access the public • Ways to evaluate a program to make it better • evaluation of program implementation • How to measure an outcome in a program and what steps to take • Evaluating VRLAC • I can apply evaluation processes to the PPI project I am involved in. • How to evaluate our programs • How to evaluate my current PPI • PPI • How to evaluate a Breastfeeding event and its effectiveness on our grant.	
Applying EBPH to Your Job (Friday, Erwin) • All. • To take all of the steps learned to use in developing a project • How to use what I have learned this week • How to evaluate things I do.	

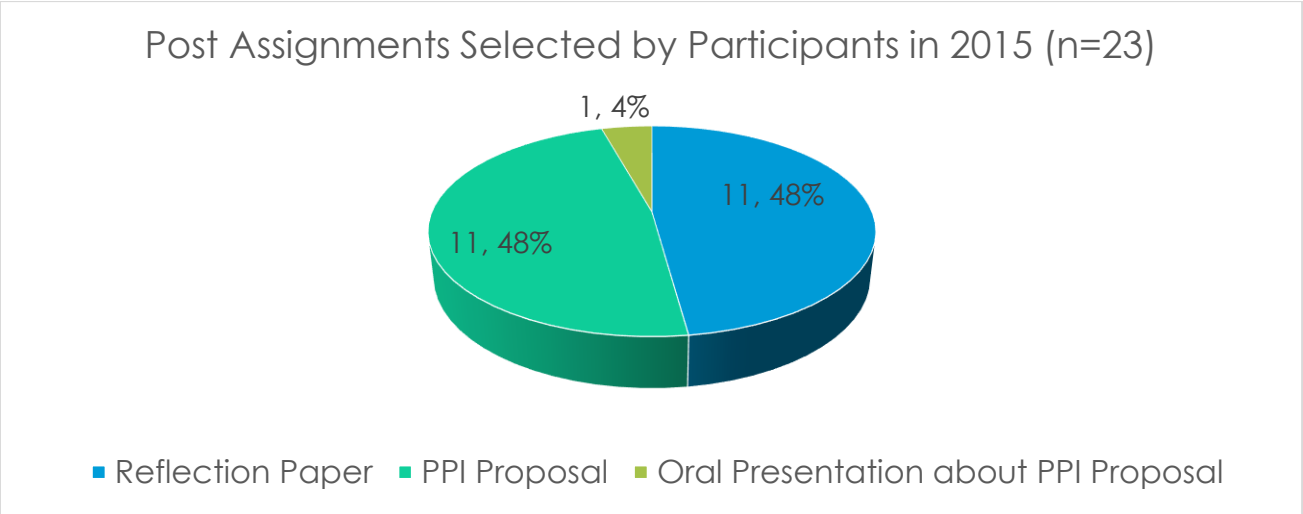
• Logic model - application to PPI • How to work better in groups / how to search more effectively for data • How to start / plan PPI • To help educate the public • logic model • Outcome evaluation • Better understanding and creating a logic model, conducting the research and breaking down. • PPI • How to use the Community Guide • Data • Structure to PPI project • Working w / Logic Model to pinpoint my outcome and how to get there. • critical thinking, group effort • a new PPI • How to actually develop and create a logic model / how to actually do a PPI • Implementing & evaluating programs. • To encourage teamwork	

IV. Post-assignments

Within one month of completing the PHSA, each participant completed an assignment and was mailed a certificate of completion after submitting the assignment. During 2012-2014, participants wrote a short (3-4 page) typed reflection paper for the purpose of relating knowledge gained through PHSA to their job and providing feedback to improve future PHSA sessions. All participants completed the reflection papers in 2012 and 2014. One person in 2013 never turned in a paper, despite numerous email and phone call reminders.

Based on participant feedback, beginning in 2015, participants were given three choices for the post-assignment: 1) reflection paper (as described above); 2) Primary Prevention Initiative (PPI) proposal to be implemented in their county; or 3) Oral presentation with PowerPoint to summarize what they would have written in a reflection paper or a PPI proposal. The PHSA planners decided to offer the PPI proposal and oral presentation options in order to provide more applied opportunities as well as meet the needs of different learning and communication styles.

Figure 10. Type of Post-assignments Completed by PHSA Participants, 2015



Of the 23 participants in 2015, approximately half selected a reflection paper (11, 48%) and the other half a PPI proposal (11, 48%). One person (4%) joined another participant's PPI team and chose the oral presentation option about the PPI. Figure 11 Of the PPI proposals, 45% (5/11) focused on obesity. (Figure 4)

Reflection paper themes in 2015

All of the eleven people who opted to write reflection papers described ways they would apply some or all aspects of the **Evidence-based Public Health framework** to their jobs, including health assessment, locating health data and evidence-based programs, planning, implementing, and evaluating.

Most people indicated they felt better equipped to plan, conduct, and evaluate **PPI projects**.

Some people cited **Quality Improvement** as a primary application of what they learned during PHSA.

One person indicated that due to job demands, she did not feel she had time to incorporate EBPH strategies into her daily job as a coordinator.

Another person reflected: "The PHSA solidified my decision to return to school for my MPH."

I have a much greater understanding of how to develop a policy or PPI initiative. We have not really been taught about all of the planning and evaluation that is involved...I now feel that I could develop a program idea and feel comfortable in my evaluation of that program. – 2015 PHSA participant

Favorite parts

All 23 participants in 2015 provided a written response within one month to describe their favorite part of the PHSA. By far, the instructors were the most liked aspect of PHSA. The 2015 instructors included: Drs. Paul Erwin, Laurie Meschke, Paul Terry, and Jennifer Jabson, all of whom are UT DPH faculty. Specifically, participants appreciated the instructors' knowledge, effectiveness, and enthusiasm. Also very popular were the EBPH content that will help participants do their jobs more effectively, group activities, and facility.

Below is a detailed list of items that were reported as being a "favorite part" in 2015.

Course content

- **Evidence-based Public Health Framework**
    - **to do job more effectively (5)**
    - increase personal professionalism
    - each day's topic related to and fed into the next day's topic (3)
    - How to do community health assessments
    - Logic Models and problem statements to use in reporting
    - Resources for finding data
    - Valuable for those who lack formal public health training
    - Program evaluation-measuring effectiveness, different types
- Primary Prevention Initiatives (PPI)
    - Learned how do PPI more effectively (3)
    - Better understand why we do them
    - By doing PPI proposal as post-activity, better understand EBPH cycle

Instruction/Instructional strategies

- **Instructors**
    - **excellent presenters, knowledgeable and enthusiastic (13)**
    - didn't just lecture, but provided practical experiences for participants that related to each person's job (2)
    - amount of information (2)
    - Dr. Erwin's daily wrap-ups highlighted the most valuable aspects of every presentation
- **Last day's group activity of putting it all together (4)**
- HIT (Health Information Tennessee) website hands-on learning (3)
- Demographics of participants - Variety of jobs and experiences (3)
- Group participation -Everyone interacted
- Session time was convenient with my work schedule

Physical environment/Amenities

- **Facilities**
    - **Very pleasant, accessible, easy to find (4)**

    - Being on campus made me feel like a student (2)
- Food/drinks-Starbucks coffee, water, and healthy snacks (3)
- Friday luncheon at Calhoun's on the River (2)
- Seating arrangements
    - Dr. Erwin switched our seating arrangements mid-week, which introduced us to new people and got us out of our comfort zone
    - Round tables were more intimate than rectangle tables
- Binder with each day's curriculum - could refer back to the previous day's material if needed

V. Quality Improvements Made Since 2012

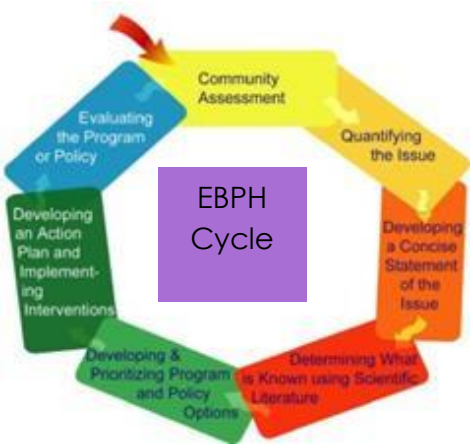
Following each PHSA course, the planning team has considered participant and instructor feedback and made changes to improve the next year. For example, participants in 2012 reported that having a group meal at the end would have been beneficial to networking, celebrating the completion of the training, and having a culminating experience. Therefore, beginning in 2013 a banquet meal has been provided on Friday following the last session, which has been very well-received by attendees. The location was changed from an older classroom building (2012) to a newer meeting center (2013 and 2014) in order to have better climate control, opportunities to work in small groups, a kitchen, and a more professional environment. Coffee was added in 2014 to accompany daily snacks, a welcome addition that will be continued.

Curriculum Refinement. The PHSA schedules for each year (Table 5), demonstrate responsiveness to participant feedback and a shift toward the EBPH framework. Key improvements are noted in red.

Table 5. PHSA Schedule: 2012, 2013, 2014, and 2015

Schedule	Monday	Tuesday	Wednesday	Thursday	Friday	
2012	CHE/CHA	Epi/Biostats	Env. Health **omitted after 2012**	HPM	Program Eval	
2013 **Added EBPH**	EBPH **shortened after 2013**	CHE/CHA	Epi/Biostats	Program Eval	HPM **Omitted after 2013**	EBPH wrap-up **added laptops and lunch**

2014 **Better alignment with EBPH**	EBPH	CHA	Quantify, Search & Summarize Issue	State Issue, Prioritize, Action Plan, Implement	Program Eval	EBPH wrap-up **full-session EBPH, hands-on**
2015	EBPH	CHA	Quantify, Search & Summarize Issue	State Issue, Prioritize, Action Plan, Implement	Program Eval	EBPH wrap-up Increased # of laptops (groups of 2 instead of 4)



Commentary. After 2012, the Environmental Health session was omitted because, while participants connected with it personally, the majority felt they could not apply the content to their job. In 2013, the EBPH framework became a focus, but the sessions did not follow sequence (in part due to instructor availability), and the session objectives were not fully aligned with EBPH (Health Policy and Management was not related well). In 2014, sessions followed the EBPH sequence and related objectives, adapted from Dr. Ross Brownson's EBPH modules.

Each year instructors have included an increasing amount of group work and hands-on activities, with the greatest example being the Friday wrap-up, which includes a hands-on small group activity to apply the EBPH cycle to a specific health concern in their county and practice computer skills. The one aspect that has been a resounding success and repeated every year has been Dr. Erwin's daily introduction and conclusion, which provide continuity throughout the week and incorporate real and relatable examples from his past work as the ETR Director. The addition of the group lunch at the end of the week has also been very positively received.

The following improvements were made in 2015 based on 2014 feedback from participants and PHSA committee members.

Application process streamlined for efficiency

- Applicants filled out entire application online (eliminated the coordinator's data entry);
- Obtained supervisor's signature through a new Supervisor Approval Form (pdf) as opposed to asking the supervisor to sign the application itself (simplified the process)

- Refined online competency assessment to be more readable and less overwhelming (added completion status bar, numbered the focus areas, removed unnecessary numbers on instructions)

Location/physical space more conducive to learning

- More table space for working (spreading out notebooks)
- Instead of U-shape, put 2 tables facing each other with 4 participants (2 facing 2); to promote group work, a PH reality that should be practiced; On the second day, tried round tables which were even more effective so continued those the rest of the week

Materials/Handouts more accessible

- Emailed PowerPoints after each session to make slides accessible electronically

Content/teaching more practical, relevant, and interactive

- Collaborated with ETRO/County Directors for PHSA to focus explicitly on PPI examples that can be applied firsthand (i.e., use PHSA to train PPI teams on real projects)
- Lessened the intensity of the "Quantifying the Issue" session
- Added more scenario situations (i.e., gave a problem statement to work through as a class, then gave a different problem statement for individuals to work through then discuss as a class)
- Increased number of hands-on activities
- Asked instructors to provide real-life scenarios of applying each step of EBPH with small group interactions everyday (not just on Friday)
- Added alternatives to the reflection paper post-activity, including a PPI proposal or an oral presentation

VI. Recommendations and Future Directions

Recommendations:

Participant Suggestions for Improvement. Everyone provided a written response within one month to describe suggestions to improve PHSA to meet the educational needs of future participants. Suggestions from 2015 participants included:

Schedule

- **Fewer days with all day sessions, i.e., 2 or 3 full days (4)**

- **Start at 8:30 or 9 am to allowing for drive time for people traveling from over an hour away (3)**
- Keep the 5 half days because full days would be information overload
- Afternoon sessions
- Extend the summer academy to 2 weeks

Teaching strategies

- **More hands-on activities (3)**
- "Homework" should be done during the class schedule time or immediately after
- Quizzes daily would help with retaining the information
- Smaller groups for the activities because it was hard to stay focused on the topic with our large groups
- Computers during some activities to make it easier to follow along and explore websites
- Randomly mix the participants early - perhaps even daily to get insight into work assignments, skill sets, motivators and attitudes
- Be sure each instructors provides regular breaks to facilitate learning and information retention—one instructor waited too long to give a break

Content

- **Cut out or simplify some material—too hard to digest in one day/over some people's heads (3)**
- Invite guest speakers from different counties to discuss how their PPI was created and progressing
- Focus on one certain areas within the health department each day (nutrition, family planning, WIC, etc.)
- Incorporate more clinical aspects to keep our attention
- Less focus on PPI and more focus on community health in general

Physical space

- Increase the room temperature (2)
- Continue with the circular tables (2)
- Parking was confusing but I figured it out by Wednesday
- Use all three projectors

Enrollment

- Provide continuing professional education credits for the class, i.e., dietitian, nurse, etc. (2)
- Make it mandatory for everyone
- Communicate to applicants that is class and you will be expected to pay attention

PHSA planning committee. In addition to the participant recommendations listed above, PHSA planners will also consider:

- Possibility of adding Tier 2 (management) and tier 3 (directors) competency assessments, or changing the pre and post assessment to more directly pertain to EBPH content, such the pre and post evaluation tool that Dr. Ross and Carol Brownson use
- Addition of "importance" rating for each of the competency areas (similar to the Tennessee Department of Health's 2012 workforce assessment)
- Discuss to what extent PPI should be a focus
- Consider value and structure of different post-activity formats (reflection paper, PPI proposal, oral presentation)
- Explore opportunities to provide follow-up educational sessions (online or evenings) to reinforce and extend EBPH participants' learning

Future Directions:

The UT DPH will not offer PHSA in 2016 due to providing a similar training in collaboration with the TDH for Middle, East, and West TN employees but intends to resume the annual PHSA for ETR employees in 2017.

VII. PHSA Planners. PHSA was collaboratively planned by regional and state health department practitioners and university faculty and staff.

Academia

Paul Erwin, MD, DrPH

Professor and Dept. Head; UT Dept. of Public Health

Julie Grubaugh, MPH, CHES

Academic HD Coordinator; UT DPH & Knox County HD

Regional HD

Juli Allen, RN MPH

Children's Special Services Director, ETRHO

Tamara Chavez-Lindell, MPH

Food Safety Center of Excellence Epidemiologist, ETRHO

State HD

Micky Roberts, MPH

Epidemiologist & Director, Office of Performance Management, TDH

PHSA Instructors. Aside from Dr. Kelly Cooper, a health department practitioner, PHSA instructors have been faculty members at the University of Tennessee at Knoxville (UTK), Department of Public Health (DPH). A few PHSA instructors are no longer employed with the University, as indicated below. Current UT DPH faculty bios and CVs are available here- http://publichealth.utk.edu/personnel/directory.html

Academia

Paul Erwin, MD, DrPH

Professor and Department Head

PHSA lead instructor 2012, 2013, 2014, 2015

J. Chen, MD, PhD

Assistant Professor

PHSA 2012

Jennifer Jabson, MPH, PhD

Assistant Professor

PHSA 2014, 2015

Laurie Meschke, MS, PhD

Associate Professor

PHSA 2013, 2014, 2015

Clea McNeely, MA, DrPH

Associate Professor and PhD Program Director

PHSA 2013

Denise Bates, MS, PhD

Former faculty member

PHSA 2012

Margaret Knight, PhD, MS, MPH

Former faculty member

PHSA 2012, 2013

Paul Terry, MPH, PhD

Former faculty member

PHSA 2012, 2013, 2014, 2015

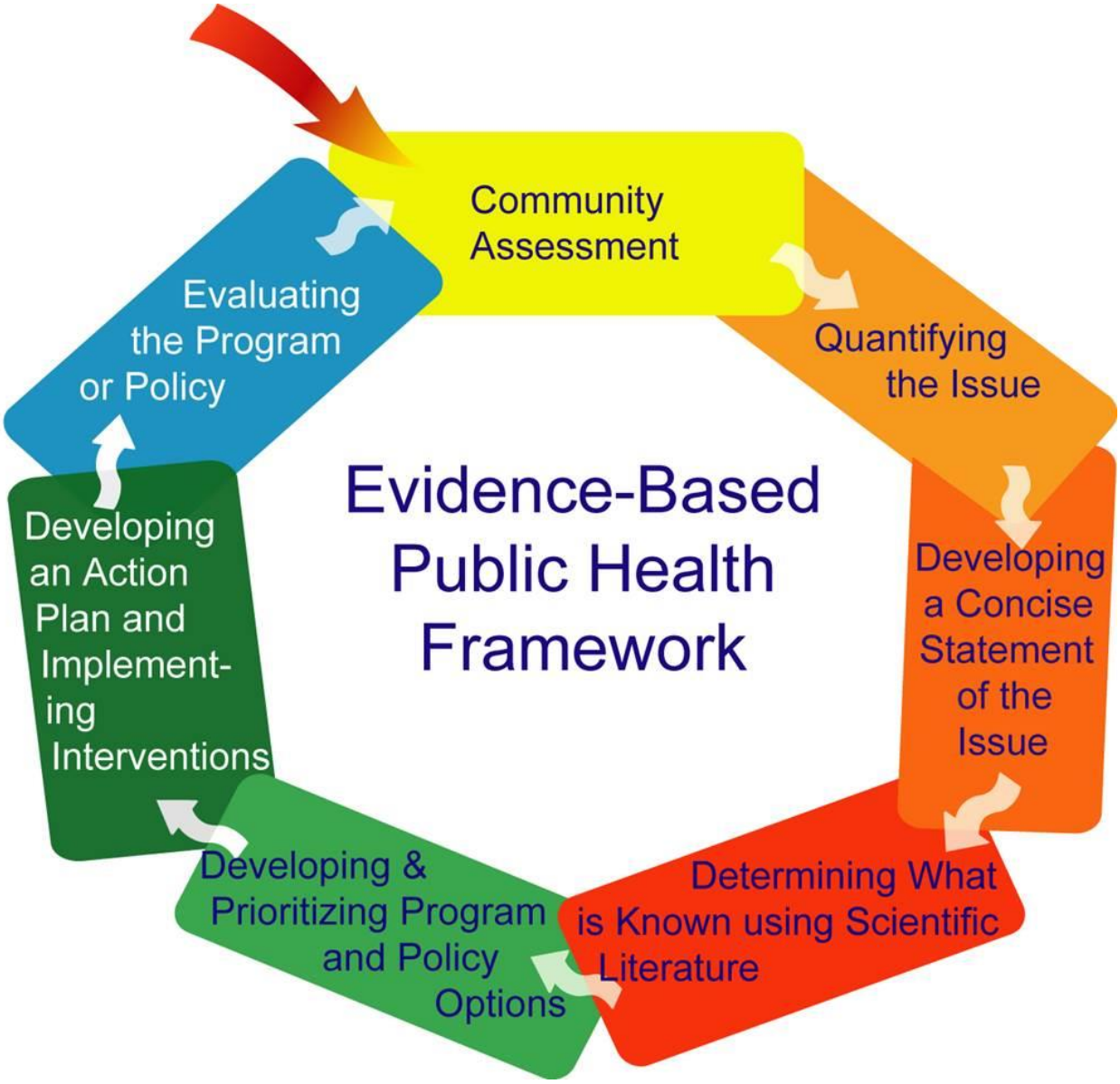
Local HD

Kelly Cooper, MD, MPH

Clinical Services Director, Knox County Health Department

PHSA 2014, 2015

VIII. EBPH Reference



Brownson, R. C., Baker, E. A., Leet, T. L., Gillespie, K. N., & True, W.R. (2010). *Evidence-based public health* (2nd ed.). New York, NY: Oxford University Press.