Executive Summary

Introduction: Since January of 2010, the Boston University School of Public Health (BUSPH) has held the contract for and managed the Local Public Health Institute (LPHI) of Massachusetts (MA). With support from the MA Department of Public Health (MDPH), the LPHI staff works with the LPHI Advisory Committee to pursue the LPHI mission: *To provide and ensure a competent workforce by strengthening and sustaining the capacity of local boards of health to prepare for and respond to public health issues and emergencies and to promote the health of residents of the Commonwealth.* This report describes the LPHI's progress during fiscal year (FY) 2018 (July 1, 2017-June 30, 2018). Below is the description of the LPHI evaluation methodology used to inform the progress report, as well as a summary of the major accomplishments of the LPHI during the reporting period and recommended next steps.

Methodology: The LPHI evaluator and LPHI management team devised several data collection and tracking mechanisms to measure progress toward LPHI objectives, including: (1) standardized training evaluations in paper and web-based formats; (2) administrative tracking by the LPHI Program Manager; (3) web-based tracking of online module utilization; and (4) brief qualitative interviews with training completers to assess the impact of LPHI training on workplace/job performance.

FY18 Accomplishments: The LPHI had another productive year and was successful in advancing work on its program objectives through its partnerships, needs assessment, training, and marketing and communications. The FY18 accomplishments include:

- **Successful partnerships:** Productive collaborations helped the LPHI address the training needs of local health practitioners and deliver multiple trainings. These partners include the Local State Advisory Committee; the Massachusetts Department of Public Health (DPH) Bureau of Environmental Health, Office of Local and Regional Health, and Office Preparedness and Emergency Response; Boston Public Health Commission; the DelValle Institute; the New England Public Health Training Center (NEPHTC) and the Coalition for Local Public Health. Additionally, two new fellows and one honorary fellow were inducted into the LPHI Fellows Program.
- **Responding to needs assessment findings**: In FY18, based on findings from the FY17 needs assessment conducted with the LSAC and its education subcommittee, the LPHI enacted additional marketing efforts to education local health practitioners and local boards of health about the LPHI's offerings; modified the requirements for application to the LPHI Fellows Program; and expanded access to the LPHI's blended courses. These quality improvement initiatives are summarized below and detailed in the full report.
- **Training:** LPHI training reached over 950 unduplicated users and addressed all 17 program areas, 10 cross-cutting, and four emergency preparedness competencies. Across all trainings, the LPHI engaged practitioners from all the Health and Medical Coordinating Coalition regions and all types of professionals within its target audience. Specific training successes include the following:
    - The *On Your Time Trainings*[1] were completed by 865 individuals. In all, 5,543 trainings were completed using *On Your Time trainings*, a 17.9% increase over FY17. Additionally, there were 14,140 hits to the online trainings (a 72.2% increase over FY17), which indicates increased use of the trainings as reference materials. Thirty-nine individuals earned a certificate for completing all trainings that make up the Public Health Core Certificate and 5 completed the Emergency Preparedness Certification Program while another 69 were working their way through it at the close of FY18. Sixteen modules underwent comprehensive review to ensure their content (e.g., regulations, best practices) is up-to-date, to update them to a new template, create "job Aids" (2 page take-aways that highlight the most relevant information from the training) and to make them Americans with Disabilities

Act/508 compliant. Evaluation results related to three modules (Orientation to Local Public Health in MA, Hoarding: A Special Housing Topic, and Public Health Law and Legal Issues in MA) showed that the trainings are satisfying to users and that they are effective at increasing trainee knowledge about the subject matter.

- The 24 graduates of the *Foundations Course*[1] were satisfied with the course and feel their understanding of the subject matter increased as a result of the training.
- 60 practitioners completed the classroom training portion of the *Massachusetts Public Health Inspection Training Housing Certificate Program (MAPHIT Housing)*.[1] Evaluation results indicate that trainees were satisfied with various aspects of the training and the training increased their knowledge about the subject matter.
- The FY18 Management Course is underway (running between June and October). Results of a follow up survey with graduates from the last cohort indicate that the training has had a positive impact on their workplace performance and effectiveness as managers.
- The LPHI delivered two *Emergency Risk Communication in Practice (ERCIP)* trainings to 48 individuals. The trainees indicated that they were satisfied with the training and that their knowledge improved as a result of training.
- The LPHI organized five sessions for the *Annual MHOA conference*. The sessions, chosen for their relevance to local public health, were: *Until Help Arrives* (n=36), *Americans with Disabilities Act (ADA) Compliance on Behalf of People with Access and Functional Needs* (n=43), *Service Animals in Disaster Response* (n=57), *Syndromic Surveillance and All Animals* (n=37), *Counter-Terrorism Readiness: It is Time* (n=63) and *Managing Spontaneous and Unaffiliated Volunteers* (n=53). Evaluation findings indicate that participants in all five sessions were satisfied with the training and believe their knowledge about the subject matter increase as a result of the training.

- **Communications and Marketing:** The LPHI utilized e-newsletters, informational email marketing, training flyers, tailored training information cards, and an online training calendar and downloadable event calendar to promote LPHI's offerings. LPHI staff also shared information on the LPHI and its work at four annual conferences and several partner meetings and disseminated reports and updates to DPH.

Recommendations – Based on the FY18 evaluation findings, the LPHI should:

1. Conduct additional marketing of the OYT trainings to practitioners in HMCC Regions 1 and 3 and, and to BOH members.
2. Review the feedback about the MAPHIT classroom training in the full evaluation report and determine how to ensure that all trainees are able to understand the material and address the navigation and use issues associated with the virtual house component.
3. Consider the feasibility of additional management training on fiscal/budget issues, supervision and staff development, and interagency collaboration, as well as opportunities for increased interaction and relationship building (e.g., a community of practice).
4. Consider the use of additional games or group interaction to help trainees understand ERCIP training content.

[1] For more detail on evaluation findings related to these trainings, see individual training evaluation reports.

I. Introduction:

Since January of 2010, the Boston University School of Public Health (BUSPH) has held the contract for and managed the Local Public Health Institute (LPHI) of Massachusetts (MA). With support from the MA Department of Public Health (MDPH), the LPHI staff work with the LPHI Advisory Committee to pursue the LPHI mission: *To provide and ensure a competent workforce by strengthening and sustaining the capacity of local boards of health to prepare for and respond to public health issues and emergencies and to promote the health of residents of the Commonwealth.* In order to achieve the LPHI's six program objectives (See logic model in Appendix A), the LPHI carries out work in four areas: (1) Partnerships, (2) Needs Assessment, (3) Training, and (4) Communications and Marketing. To simplify the reporting process and increase utility for quality improvement, this report is organized around those areas of work rather than the six problems addressed by the LPHI (i.e., the format used in previous annual reports). The report covers the period of July 1, 2017 through June 30, 2018 (i.e., FY18). For more information about any of the educational offerings or documents referenced in this report, contact the LPHI Project Manager at lphi@bu.edu or (617)358-3988.

II. Methodology:

The LPHI evaluator and LPHI management team devised several data collection and tracking mechanisms to measure progress toward LPHI objectives and desired outcomes. The methods used to inform this report are described below.

- ***Standardized training evaluation forms:*** All LPHI-supported trainings must include an evaluation component. Whenever possible, such evaluations include pre/post quiz questions to assess the extent to which students acquired knowledge as a result of training. The evaluations also assess trainee satisfaction with several aspects of training. Evaluations are self-administered with trainees either completing them on paper or online.
- ***Administrative tracking:*** The project manager routinely tracks data related to the size and composition of the Advisory Committee and its meetings, the number and types of trainings and demographics of training participants, the number and types of collaborating partners, the number of trainings with a distance education component, and the status of the communications and marketing plan, including the number of newsletters.
- ***Online training evaluations:*** Google Analytics is used to track unique and returning hits to the *On Your Time Training's* webpage. Trainees who wish to obtain a certificate of completion and contact hours for use of the online trainings may do so online as well.
- ***Key informant interviews:*** As resources allow, brief telephone interviews and/or surveys are conducted with completers of LPHI courses to assess the impact of the training on workplace/job performance.

The LPHI (and NEPHTC) evaluation strategies are based upon the Kirkpatrick Training Evaluation Model,[2] which suggests that training should be evaluated on four levels:

Level	What is assessed at each level?	How does LPHI measure each level?
1	Trainee satisfaction with and engagement in training, and perceived relevance of training to the trainee's job	Evaluated based on three Likert scale ratings related trainee agreement (1=strongly disagree to 5=strongly agree) with statements that assess their satisfaction with and the relevance of training to their jobs
2	Trainee acquisition of intended knowledge, skills, and attitudes, as well as confidence about and commitment to use training content	Evaluated based on results of a paired samples t-test comparing mean pre-test and mean post-test scores for training completers* and one statement rated by a 5-point Likert scale (1=strongly disagree to 5=strongly agree) to assess perceived knowledge gains
3	Trainee application of what was learned in training when trainee is back on the job	Evaluated via a follow up survey** using a series of Likert scale ratings that allow training completers to express agreement (1=strongly disagree to 5=strongly agree) with statements that assess the impact of training on their job performance
4	The degree to which targeted outcomes or desired impact occur as a result of critical on the job behaviors that result from training	Methodology for assessing level 4 impact has not yet been developed

*Whenever possible, a pre/post-test is administered to assess level 2 results. However, for brief (e.g., one-hour webinars) or trainings proven effective on level 2 over time, a pre/post-test may not be administered.
**Time period for the follow up survey differs by training and depends upon how long LPHI management and instructors believe trainees need to apply the material learned in the training. Follow up surveys are generally completed within six months of the end of a given training.

Quantitative analyses are conducted using SPSS or Excel and thematic analysis is conducted with qualitative data. For more detail on any of the data sources described above or related evaluation documents, contact the LPHI evaluator at hopewk@comcast.net.

[2] Kirkpatrick Training Evaluation Model available at: http://www.kirkpatrickpartners.com/OurPhilosophy/TheNewWorldKirkpatrickModel/tabid/303/Default.aspx

III. Findings:

A. Partnerships

Partnerships with public health partners are essential to achieving two important LPHI outcomes: (1) *Ensuring that the LPHI trainings and programs are aligned with the learning priorities of the LPH workforce and are of high quality*; and (2) *increasing educational offerings and collaborative projects*. In FY18, five partnerships helped the LPHI to achieve these outcomes. Additionally, the LPHI Fellows Program recognizes the important contributions of public health practitioners to the field and encourages their support of the LPHI and its educational offerings.

1. Organizational partners

LPHI has a productive partnership with its funders, the Office of Local and Regional Health (OLRH) and the Office Preparedness and Emergency Management (OPEM) at the Massachusetts Department of Public Health. In FY18, the LPHI met with the OLRH project officer on seven occasions to discuss workstreams, plans, progress and to answer questions. Additionally, the LPHI provided monthly updates to both the OLRH and OPEM throughout FY18. The LPHI also worked with OPEM, based on new OPEM guidelines, to reconfigure the form used by organizations to request the use of Public Health Emergency Preparedness funds for conferences and trainings. The LPHI also collected forms for the annual MEHA and MHOA conferences, working with conference organizers and OPEM to address challenges and make recommendations for overcoming obstacles or shortcomings in their applications prior to sending on to OPEM at MDPH.

The LPHI worked closely with six other organizations in FY18 to inform LPHI planning, market the LPHI, plan and deliver training, engage participants and instructors, and/or provide resources (financial, subject matter expertise) for training. These partners are described below, including how their partnership with LPHI contributed to the LPHI's progress in FY18.

The Local State Advisory Committee (LSAC) is an advisory body to the Commissioner of the Massachusetts Department of Public Health (MDPH) on public health emergency preparedness. Since 2013, the 30-member LSAC has served as the Advisory Committee for the LPHI. In FY18, the LPHI staff met with LSAC three times to present on LPHI progress and submitted five program updates. The LPHI works closely with LSAC's Education Subcommittee to inform its program planning. In 2018, the LPHI had four meetings with the Education Subcommittee, all via teleconference to solicit feedback and guidance on LPHI projects and plans.

The Boston Public Health Commission (BPHC), an independent public agency providing a wide range of health services and programs to the City of Boston, has a mission to protect, preserve, and promote the health and well-being of all Boston residents, particularly those who are most vulnerable. In FY18, the BPHC collaborated with the LPHI in the delivery of the Managing Effectively in Today's Public Health Environment course. Half the course participants and several instructors were from the BPHC. BPHC also collaborated with LPHI to develop a paper about the course and a poster displaying evaluation findings relate to the course. Evaluation data for the Management course is offered under *Training* (see section IIIC).

The Bureau of Environmental Health (BEH), MDPH, has a broad mission of protecting the public health from a variety of environmental exposures. The BEH responds to environmental health concerns and provides communities with epidemiologic and toxicological health assessments. In FY18, the BEH provided subject matter experts and instructors for LPHI trainings.

The DelValle Institute for Emergency Preparedness, founded in 2003, is a training institute with a mission to enhance community resilience in order to prepare for, respond to, and recover from emergencies that affect health and access to healthcare. The DelValle Institute links the latest research and guidance with best practices in the field to deliver high-quality, skills-based preparedness and response education for healthcare and public health practitioners and their public safety partners. In FY18, the LPHI and DelValle worked together to review and assess emergency preparedness training throughout the Commonwealth, to assist the LPHI in updating the LPHI Emergency Risk Communications in Practice (ERCIP) training curriculum and to support in the delivery of both the March and May 2018 ERCIP course . Evaluation data for the ERCIP course is provided in the *Training* section of this report (see 3C).

The New England Public Health Training Center (NEPHTC) is funded by the Health Resources and Services Administration (HRSA) and has a mission to strengthen the technical, scientific, managerial, and leadership competencies of the current and future public health workforce in New England to ensure regional capacity to deliver high quality essential public health services. Like the LPHI, the NEPHTC is managed by the Boston University School of Public Health (BUSPH). With both public health training centers located under one roof, the LPHI and NEPHTC are able to leverage resources to meet the training needs of the local public health workforce. In FY18, the LPHI and NEPHTC were able to use shared technology to develop courses and open courses to wider audiences. Additional funding also allowed the two training centers to offer blended courses (i.e., combination online and face-to-face trainings) and to offer joint marketing efforts (e.g., side-by-side displays/tables at conferences).

The Coalition for Local Public Health (CLPH) is comprised of five public health organizations: The Massachusetts Association of Health Boards (MAHB), Massachusetts Association of Public Health Nurses (MAPHN), Massachusetts Environmental Health Association (MEHA), Massachusetts Health Officers Association (MHOA), and Massachusetts Public Health Association (MPHA). These organizations are dedicated to advocating for the resources needed to promote healthy communities in Massachusetts. Collectively, the CLPH organizations represent over 4,900 citizens and professionals interested in supporting the Commonwealth's local health infrastructure. In FY18, the CLPH helped the LPHI market its offerings to their respective members and provided resources to help defray the substantial costs of the Foundations and Management courses, which include staff time, Subject matter Expert time, classroom space for in-person days and food on those days, etc. The CLPH and LPHI also collaborated on the Orientation to Local Public Health day in June. The LPHI Program Managers also participated in CLPH executive committee meetings throughout FY18, as well as chapter meetings from CLPH member organizations MHOA, MEHA, and MAPHN.

2. The LPHI Fellows Program

The LPHI Fellows Program allows the LPHI to encourage individuals within the MA state and local public health workforce to engage in continuing education and individual professional development, give back to the profession through individual service; and support the work of the LPHI. Each year since 2012, the LPHI has inducted new members into the LPHI Fellows Program. LPHI Fellows often serve as subject

matter experts and course instructors for the LPHI. In FY18, two new fellows were inducted into the program. They are:

- Ruth Clay, MS, MPH, Health Director for the City of Melrose and Town of Wakefield
- Gail Johnson, BSN, RN, Public Health Nurse, Westford Health Department

Additionally, Dr. Alfred DeMaria, Jr., MD, Medical Director, State Epidemiologist, Bureau of Infectious Disease and Laboratory Science, Massachusetts Department of Public Health was named as an honorary fellow.

B. Needs Assessment (FY18 Follow Up Activities)

LPHI trainings are designed to improve the 17program area and 10 cross-cutting competencies identified by the Council on Linkages as critical for public health practice. Additionally, LPHI trainings address four emergency preparedness competencies. A first full draft of an LPHI competency report was completed in February of 2010 and an inventory of existing trainings and a gap analysis were completed in July 2010. Since then, LPHI staff have been cross-walking LPHI offerings with the competencies to ensure that LPHI resources are being used to address the competencies needed by the LPHI workforce. The trainings provided by the LPHI in FY18 covered all 31 competencies. While all of the competencies are addressed through the LPHI's current offerings, the LPHI continues to assess the training needs of the local public health workforce to achieve the outcome of *improved understanding of the training needs of local public health, as well as the trainings that exist and those that are needed.* To that end, trainees are routinely asked to provide information about desired training topics for future trainings on their session evaluation form. In this way, the LPHI is able to track the needs and interests of those engaged in training.

In FY17, the LPHI completed an assessment with LSAC members, who are charged with advising the LPHI, to assess the LPHI's reach, accessibility/responsiveness, value, and program management. The assessment also sought feedback on the LPHI Fellows Program and recommendations for training quality improvement. The LPHI evaluator interviewed the LSAC Chairman and five of the six members of LSAC's Education Subcommittee and conducted an online survey to which 20 of LSAC's 30 members responded (a 66.6% response). The *Assessment of the Local Public Health Institute: Report of Local State Advisory Committee Feedback* provides detailed assessment findings and a series of recommendations. **Those recommendations with the action status associated with each are described below.**

Recommendation 1: Conduct additional marketing to local health practitioners about the LPHI's offerings and educate local board of health members about the importance of such training. In FY18, the LPHI conducted additional marketing efforts including in-person marketing at four conferences, the creation and dissemination of multiple newsletters, and partnering with the Office for Local and Regional Health to distribute printed marketing materials at western MA events. In FY18, the LPHI had planned to send out a welcome letter to Boards of Health members throughout the Commonwealth. However, difficulties in obtaining an updated list from CLPH members made this endeavor non-feasible. It is possible that in FY19 the LPHI will be able to send some sort of communication (hard copy or electronic) to the Boards of Health, but this is still not definite.

Recommendation 2: When updating or creating new trainings, review them with an eye toward their applicability to practitioners serving small towns as well as those in larger communities. The LPHI is committed to ensuring its trainings are relevant to all public health practitioners in the Commonwealth.

LPHI developed two new courses, EDS Guidance and Strategic National Stockpile (SNS) this year for OPEM. Two more courses, Tickborne Disease Surveillance and Prevention and Health Promotion and Health Equity, underwent significant changes to better meet the needs of practitioners in the Commonwealth. Each course was reviewed with the needs of small town practitioners in mind. The LPHI will continue to consider the needs of practitioners in communities of all sizes as it plans trainings in the future.

Recommendation 3: Review the goals of LPHI fellows program and modify the requirements and application accordingly. In FY18, the LPHI extended the time limits related to education and other activities required to be eligible for the LPHI fellows program to five years. Previously, activities were required to be within the previous two years. Additionally, the LPHI expanded the categories of services that fall under the Stewardship portion of the application.

Recommendation 4: Strategize with MDPH and LSAC to expand the LPHI's resources and ensure its sustainability. The LPHI worked with the NEPHTC to leverage resources for marketing and training and with partners such as the CLPH and BPHC to deliver trainings during FY18.

The needs assessment also yielded the following two recommendations, as resources allow.

Recommendation 5: Expand access to the blended courses (e.g., offering more slots for participants, offering courses more often each year). The LPHI increased slots for the MA PHIT Housing course by running it twice in FY18. Planning also began in FY18 to deliver the course in Western MA in late Fall of 2018 to increase access for practitioners in that region.

Recommendation 6: Review and prioritize recommendations for future training and other initiatives, including new management topics, health equity and leadership. The LPHI was able to modify an existing on-line training, Health Promotion, to incorporate information about health equity. Additionally, the principal investigator hosts a Leadership working group that is exploring leadership programs for the LPHI, in collaboration with the School Health Institute for Education and Leadership Development (SHIELD) and other stakeholders.

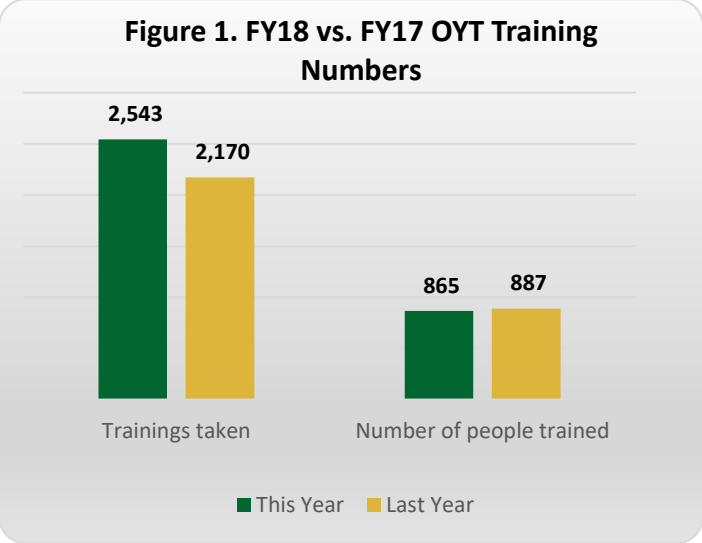
C. Training

The LPHI provides a range of training programs to achieve the outcome of *an increase in the number of local public health workforce members trained on cross-cutting, program area, and emergency preparedness competencies.* Additionally, the LPHI has focused on distance education *to achieve an increase in participation in LPHI offerings across all regions.* In FY18, the LPHI delivered training to 908[3] unduplicated individuals through four blended (online and classroom) trainings and through 46 *On Your Time* online, self-paced trainings. The FY18 trainings cover all 17 program area competencies and 10 cross-cutting competencies, as well as the four emergency preparedness competencies This section below details the utilization and outcomes data associated with the *On Your Time* trainings and the blended trainings.

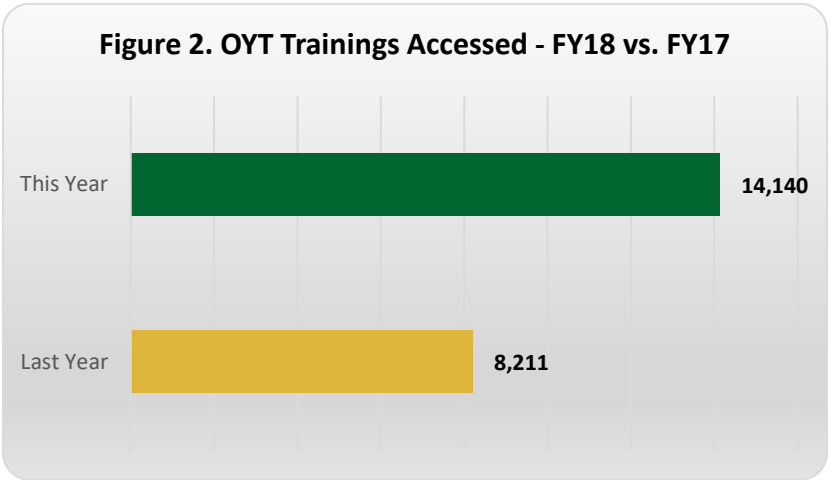
[3] 36 individuals engaged in two DelValle-led ERCIP sessions and the LPHI chaired sessions at MHOA. Because names of trainees are not available, they cannot be included in the unduplicated count. The actual count may be higher than offered here.

1. On Your Time Trainings

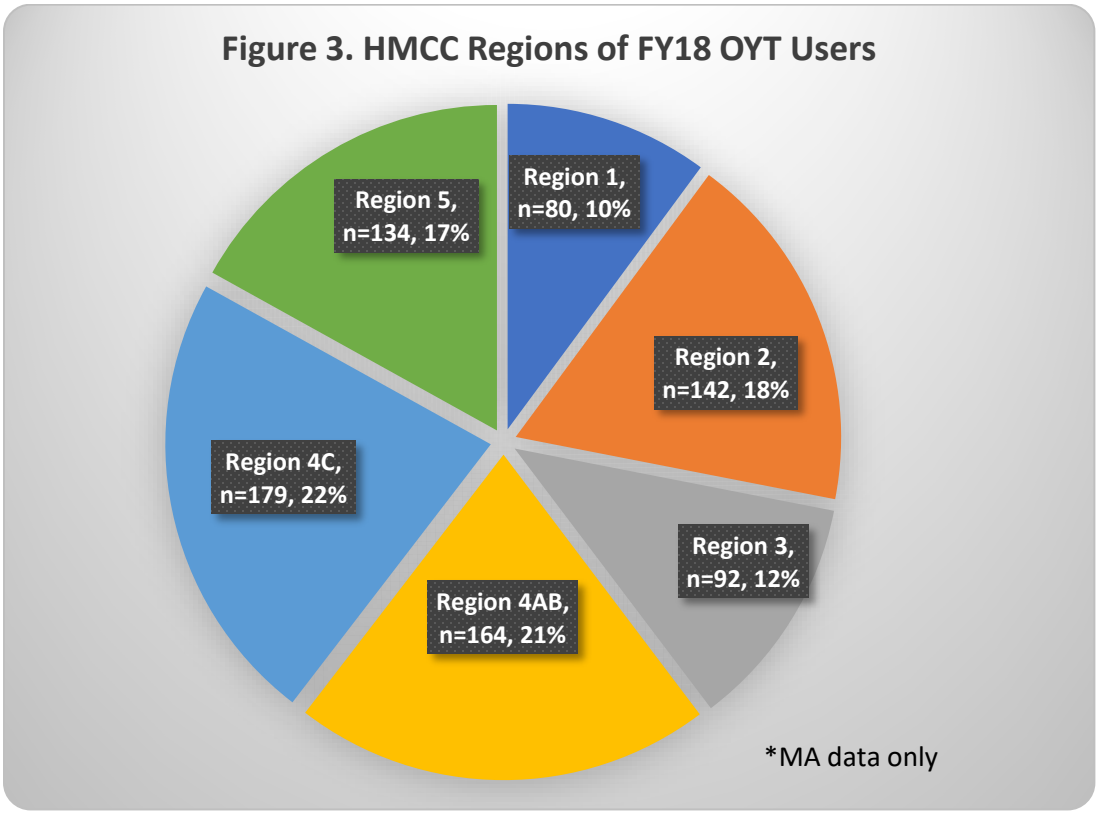
In FY18, 865 individuals completed 2,543 trainings through the *On Your Time (OYT)* trainings. Although there was a slight decline in the number of individuals trained in FY18 vs. FY17 (865 vs. 887, respectively), there was an increase in the online trainings utilized in FY18 vs. FY17 (2,543 vs. 2,170) (See Figure 1).



In addition to their value as trainings, the online trainings can also be used by public health practitioners for reference purposes. For example, rather than completing an entire online training module and the evaluation components, a practitioner may log in to find specific information he/she needs. As shown in Figure 2, in FY18, there were 14,140 "hits" to the online trainings compared to 8,211 in FY17 (a 72.2% increase).



Just over 91% of *all* of those who completed the trainings work in one of the Commonwealth's HMCC regions. As shown in Figure 3, OYT users work in all of the HMCC regions with the highest utilization among those in Regions 4C (22%) and 4AB (21%) and lowest in Region 3 (12%) and Region 1 (10%). The LPHI may want to consider additional marketing of the trainings to practitioners in HMCC Regions 1 and 3 and, as part of future needs assessment efforts, ensure that the constellation of trainings meet the needs of practitioners in those regions.



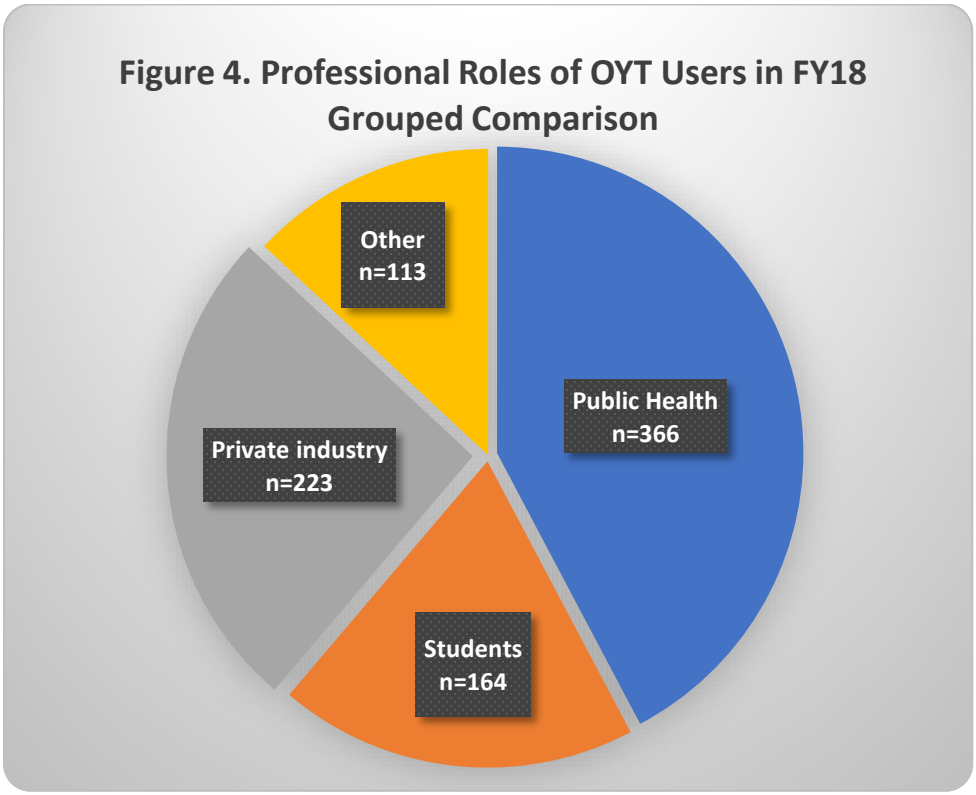
The LPHI tracks the professional roles of OYT users, offering 17 options for users to choose from, including 10 public health roles, five "others" (i.e., public safety, health care, school nurses, social services, undeclared), private industry, and student (See Appendix B for role crosswalk).

In FY18, 223 OYT users were from private industry. By training those in private industry, the LPHI helps to ensure compliance with the laws and regulations of the Commonwealth (e.g., by ensuring tanning booths are operated correctly or that Title 5 systems are being installed properly) and, thus, helps industry to reinforce the work of local public health.

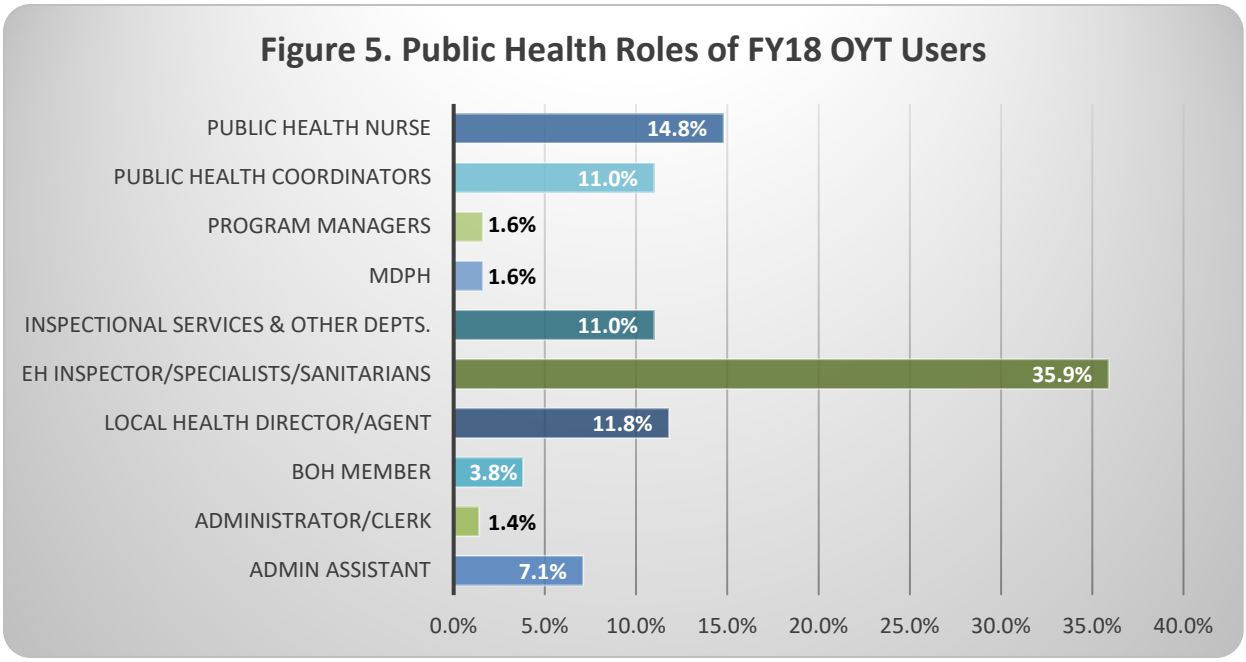
In FY18, 164 OYT users were students. By training students, the LPHI is exposing them to the roles and responsibilities of local health practitioners and contributing to the preparation of the future public health workforce.

By grouping the 10 public health roles, it is easier to assess the proportion of OYT trainings used by public health practitioners vs. students, private industry users, and others. As shown in Figure 4, 366

public health professionals utilized the OYT trainings in FY18. They represent 42.3% of OYT users vs. 19% who are students, 25.8% who are from private industry, and 13.1% others.



As show in Figure 5, of the 366 practitioners who utilized OYT trainings in FY18, 46.9% are in environmental health (35.9% inspectors/specialists/sanitarians and 11% inspection services and other departments). State public health workers comprise 1.6% of users. The remaining 51.5% work in various local public health roles. Of those, OYT utilization was highest among public health nurses (14.8%), local health directors/agents (11.8%) and public health coordinators (11%). Although utilization of OYT trainings among BOH members (3.8%) is still relatively low in comparison to other types of LPH practitioners, it is an increase over FY17 when BOH members made up 0.7% of the public health practitioner use of the OYT trainings. The LPHI should build upon this modest increase by marketing the availability and value of the OYT trainings to BOH members.



In FY16, the LPHI launched a bundled certificate program titled the Public Health Core Certificate, which offers core content to new governmental public health staff or board members, those with no formal public health education, or those who want a refresher course. The Public Health Core Certificate consists of 10[4] *On Your Time* trainings: the Orientation to Local Public Health in MA, Public Health Law and Legal Issues in MA, Emergency Preparedness in MA; three environmental health trainings (Food Protection for Regulators, Housing, and Nuisance Control and Abatement) and four population health trainings (Disease Case Management, Health Promotion and Disease Prevention, Immunization, and Surveillance of Infectious Diseases). In FY18, 39 individuals completed the Public Health Core Certificate vs. 33 in FY17.

In FY17, the LPHI, in conjunction with the Office of Preparedness and Emergency Management of the Massachusetts Department of Public Health, created and produced a second training certificate for the Local Public Health workforce: The Emergency Preparedness Training Certificate. The Emergency Preparedness (EP) Certificate was developed for staff and volunteers from municipal or state agencies across Massachusetts who are responsible for public health emergency preparedness and response activities. It involves successfully completing 15[5] self-paced trainings, totaling 27.5 hours of study, and a final, culminating exam to receive a training certificate. In FY18, 5 individuals completed all requirements for the EP Certificate; 69 others were in the process of completing the requirements at the end of the fiscal year.

In FY18, 16 OYT trainings underwent comprehensive review to ensure their content (e.g., regulations, best practices) is up-to-date, to update them to a new style sheet, to add "Job Aids" , which are 2 page take-aways that highlight the most relevant information from the training, and to make them Americans With Disabilities Act/508 compliant. Five others scheduled for review were rescheduled for review in FY19 due to challenges in engaging subject matter experts for the review process. A similar challenge

[4] In FY18, an eleventh training (ACA and Public Health) was removed from those included in the Public Health Core.
[5] In FY18, a 16th training (ICS 808) was retired by FEMA and removed from the EP Certificate Program.

delayed the launch of two new OYT trainings on the Strategic National Stockpile and emergency dispensing site guidance issued by MDPH.

In August 2017, the LPHI evaluator analyzed data related to three OYT trainings and produced a report of evaluation findings[6]. The evaluator reviewed Likert scale ratings (1=strongly disagree to 5-strongly agree) related to levels 1 and 2 of the Kirkpatrick evaluation model, a true/false statement about whether trainees will apply the training to a state or national certification, and pre and post-test results to assess the impact of the trainings on trainee knowledge. The evaluator reviewed the *Orientation to Local Public Health in MA (Orientation)*, *Hoarding: A Special Housing Topic (Hoarding)*, and *Public Health Law and Legal Issues in MA (PH Law)*. Figure 6 shows the number of completers, the proportion of trainees who agreed (somewhat or strongly agreed) with the statements of satisfaction, and the results of statistical analysis of the pre/post-test results. For all three trainings, the majority of trainees agreed with the satisfaction statements and indicated they will apply the training to a certification. Improvements in quiz scores from pre-test to post-test were statistically significant, which indicates the trainings were successful in improving trainee knowledge.

Figure 6. Evaluation results of annual review of OYT trainings

OYT Training	n	Level 1: Agreement with three satisfaction statements	Level 1: Will apply training to certification	Level 2: Perceived improvement in knowledge	Level 2: Were increases in quiz scores from pre to post statistically significant?[7]
Orientation	193	65.9 to 82.2%	65.9%	65.9%	Yes. t (70)=-15.059; p=.000 and t (109)=-16.724; p=.000
Hoarding	90	91.3 to 94.3%	79.4%	91.4%	Yes. t (28)=-7.423; p=.000 and t (40)=-10.679; p=.000
PH Law	71	85.7 to 87.3%	67.1%	95.7%	Yes. t (41)=-11.325; p=.000 and t (18)=-9.363; p=.000

2. Foundations Course

The goal of the Foundations Course is for Massachusetts public health practitioners who carry out routine and emergency environmental and population-focused health functions to provide the ten essential public health services according to the local and state laws, regulations, and policies. Participants may be new to the field of public health or those with experience and interest in advancing their knowledge and skills. The course work involves 60 hours of work, including three days of classroom training; two webinars; 16 self-paced online trainings; and additional work (e.g., pre-work, preparing questions for instructors and panelists). The 2017 iteration of the course crossed over FY17 and FY18. It began on June 9 and concluded on November 8, and included a mix of classroom training, webinars, self-paced trainings, and out-of-class preparation.

Although all sessions of the Foundations Course were evaluated, the evaluation findings for the FY17/18 iteration apply only to “live” sessions (in-person or webinars): the Introduction to Environmental Health

[6] Report entitled Local Public Health Training Institute of MA FY17 On Your Time Training Evaluation

webinar, the Real World Environmental Health Day, the Population Health webinar, and the last day of the course, which included a session on evaluation and panel discussion related to Public Health Nursing. The other sessions involved online trainings, which are also utilized by trainees outside of the Foundations Course and are evaluated separately based on data provided by all module users. Given the history of successful evaluation at level 2 in the past, and limited resources for level 3 assessment this year, the decision was made that the FY17/18 iteration of the course would only be evaluated for level 1 results.

The evaluation findings indicate that the Foundations Course was successful in several ways, including its engagement of participants from all regions of Massachusetts and from a range of public health practitioners. In total, 27 people began the Foundations Course and 24 graduated (an 88.8% completion rate). The participants represent all of the HMCC regions of Massachusetts with the greatest representations from regions 4AB, 5 and 3 (See Figure 7).

Figure 7. Regional representation of Foundations Course participants (n=27)

Region:	#	%
Region 1: Western	3	11.1%
Region 2: Central	2	7.4%
Region 3: Northeastern	6	22.2%
Region 4A and 4B: Greater Boston and MetroWest	7	25.9%
Region 4C: City of Boston	0	0.0%
Region 5: Southeastern & Cape Cod	7	25.9%
State	2	7.4%

As shown in Figure 8, the course primarily attracted environmental health professionals and public health nurses (at 33.3% each). The nine other trainees have six different professional roles.

Figure 8. Professional roles of Foundations Course participants (n=27)

Roles:	#	%
Administrative Assistant	1	3.7%
Administrator/Clerk	2	7.4%
BOH Member	1	3.7%
Local Health Director/Agent	3	11.1%
EH Inspector/Specialists/Sanitarians	9	33.3%
Private Industry	1	3.7%
Public Health Coordinators	1	3.7%
Public Health Nurse	9	33.3%

As shown in Figure 9, across the four sessions, the majority of participants were satisfied, felt their knowledge increased as a result of training, and envisioned using what they learned in their jobs. They felt the information was presented in a clear and understandable way and that the learning objectives for each session were met.

Figure 9. Foundations Course Level 1 & 2 Findings	*Intro to EH Webinar**	*Real Word EH Day*	*Population Health Webinar*	*Final Day*
My understanding of the subject matter has improved as a result of having participated in this training. (Level 2)	19 (100%)	23 (96%)	22 (90%)	24 (100%)
I have identified actions I will take to apply information I learned from this training in my work. (Level 1)	18 (95%)	23 (96%)	23 (96%)	24 (100%)
The information was presented in ways I could clearly understand. (Level 1)	18 (100%)	23 (96%)	22 (92%)	24 (100%)
The learning objectives were met by this training. (Level 1)	17 (94%)	23 (96%)	24 (100%)	24 (100%)
**The total n differed across questions (18 vs. 19)*				

3. MA PHIT Housing

MAPHIT Housing is designed for health and housing inspectors charged with enforcement of the state sanitary codes 105 CMR 400 and 410: General Administrative Procedures and Minimum Standards of Fitness for Human Habitation. The program includes prerequisite *On Your Time* trainings, three days of classroom training, a written exam, five supervised field training inspections, and an online final assessment with a virtual housing inspection and questions about inspection processes and required documentation (inspection report and correction order). Those who successfully complete classroom training earn continuing education credits and those who successfully complete all components of the program are issued a certificate. Although a cohort of trainees begins the program at the same time, individuals may complete the field inspection and assessment portions of the program on different timelines. Therefore, the trainees within a given cohort may not all complete the program at the same time.

Two iterations of classroom training took place within the fiscal year, in May and December. In May, 31 participants completed the course. In December, 29 completed the course. In both May and December, over one-third of the cohort was from Region 4AB. Regions 1, 2, and 4C had the smallest representation in the course. Based on recommendations following the MA PHIT evaluation, the next iteration of the course will take place in Region 1.

Figure. 10 Regional representation of MA PHIT Housing participants

	May Cohort (n=31)		*December Cohort (n=29)*	
Region:	#	%	#	%
Region 1	1	3.2%	1	3.40%
Region 2	4	12.9%	2	6.90%
Region 3	4	12.9%	5	17.20%
Region 4AB	12	38.7%	10	34.50%
Region 4C	2	6.5%	1	3.40%
Region 5	4	12.9%	7	24.10%
State	4	12.9%	3	10.30%

As one might expect based on the training subject matter, inspectional services and environmental health inspectors/specialists/sanitarians were heavily represented among the trainees, although those in a range of other roles also participated in the training (See Figure 11).

Figure 11. Professional roles of MA PHIT Housing participants

	May Cohort (n=31)		*December Cohort (n=29)*	
Roles:	**#**	**%**	**#**	**%**
Environmental Health Inspector/Specialists/Sanitarians	3	9.7%	8	27.6%
Inspectional Services & other depts.	20	64.5%	16	55.2%
Public Health Nurse	1	3.2%	1	3.4%
MDPH	0	0.0%	1	3.4%
Public Health Coordinators	3	9.7%	2	6.9%
Private Industry	0	0.0%	1	3.4%
Local Health Director/Agent	4	12.9%	0	0.0%

A full report of findings[8] is available for the two iterations of the course. The available data indicate that trainees were satisfied with the classroom training, saw it as relevant and something they could foresee using in their work, and that they understood the content better as a result of the training. The virtual house received mixed reviews, likely due to issues related to navigation and ease of use. Albeit limited due to the small numbers of students who had completed this part of the course at the time of evaluation, the available field inspection data suggest that participants are satisfied with and value the field training aspect of the program. The limited final assessment data show that three of three participants who completed it achieved some mastery of the course content. There were two recommendations based on the evaluation findings described in this report:

5. Review the feedback about the classroom training and determine which steps, if any, may be necessary to reduce confusion and ensure all trainees, regardless of field experience, are able to understand the material.
6. Review and address the navigation and use issues associated with the virtual house component of the program.

4. Managing Effectively in Today's Public Health Environment

The FY18 iteration of the Managing Effectively in Today's Public Health Environment course (herein called the Management Course) began on June 4, 2018 and is currently underway and expected to conclude in October of 2018. The course takes place over 18 weeks and is comprised of 15 sessions (10 live webinars, three self-paced online sessions, and two classroom sessions). For each session, pre-work is required to prepare students for the upcoming session. Following each session, post-assignments require students to utilize the information covered in the previous session. Each student is assigned to a group and provided a mentor with whom he/she communicates throughout the course. A report of evaluation findings will be available for the FY17/18 iteration of the course in late 2018. Based on the recommendations in the report of evaluation findings, the LPHI made several modifications to the

[8] MA Public Health Inspector Training Housing Certificate Program (MAPHIT Housing) Summary of the 2017 Evaluation Findings

course, including changing the timing of the course (previously held November to March), adding additional instructions to the course page, and holding a webinar to familiarize trainees and mentors to increase integration and ensure better participation.

In September 2017, the LPHI evaluator conducted a follow up survey with those who completed the last iteration of the Management Course (November 2016 to March 2017) to assess the impact of the training on their job performance (level 3). The survey was conducted six months after the end of the course to allow participants time to apply the concepts they learned in the course. Thirty of Forty-eight course graduates (62.5%) completed the survey. The findings from the level 3 survey indicate that most respondents feel the course has had a positive impact on several aspects of their work as managers and was effective at influencing their job. There were only a few suggestions for improving the course. In particular, they believe they are better able to support the professional development of their staff, motivate their staff and colleagues, advocate for staff and programs, build consensus among staff and colleagues, work more collaboratively, and think strategically about how to achieve goals. They also believe they have improved in several areas as managers, including the management of projects and teams, dealing with grievances, recruiting and hiring staff, onboarding and coaching staff, and leading organizational change. The survey respondents offered a few suggestions for improving the course, including: further addressing fiscal/budget issues, supervision and staff development, and interagency collaboration, as well as offering opportunities for increased participant interaction and relationship building. The LPHI may want also to assess whether sufficient demand exists among previous and future cohorts for continued learning (e.g., advanced management training, a community of practice).

5. Emergency Risk Communications in Practice

The LPHI offered two sessions on Emergency Risk Communications in Practice (ERCIP) in FY18. Thirty-nine people attended the March 2017 training and nine participated in the May 2017 training. Because a separate detailed report of findings was not created for this training, all of the available evaluation findings are provided below.

All participants in the March 2017 session were from HMCC region 3. The May 2017 session drew participants from Regions 2, 4AB and C, and 5 (See Figure 12).

Figure 12. Regional representation of ERCIP Participants (n=48)

Region:	*March # (n=39)*	*March % (n=39)*	*May # (n=9)*	*May % (n=9)*
Region 1	0	0%	0	0%
Region 2	0	0%	1	11.1%
Region 3	39	100%	0	0%
Region 4AB	0	0%	4	44.4%
Region 4C	0	0%	3	33.3%
Region 5	0	0%	1	11.1%

Two-thirds of participants in the March session were local health directors/agents (30.8%) or environmental health inspectors/specialists/sanitarians (35.9%). Public health coordinators made up an additional 23.1% of the training audience. In May, the class was mostly comprised of public health coordinators (44.4%) and public health nurses (33.3%).

Figure13. Professional Role of ERCIP Participants

	March	n=39	May	n=9
Roles:	**#**	**%**	**#**	**%**
Local Health Director/Agent	12	30.8%	1	11.1%
Environmental Health Inspector/Specialists/Sanitarians	14	35.9%	1	11.1%
Healthcare	3	7.7%	0	0.0%
MDPH	1	2.6%	0	0.0%
Public Health Coordinators	9	23.1%	4	44.4%
Public Health Nurse	0	0.0%	3	33.3%

As shown in Figure 14, all (100%) of participants who completed the evaluation agreed or strongly agreed that their understanding of the subject matter improved as a result of training, the information was presented clearly, they were satisfied with the training, and the learning objectives were met. Only one person (in the March cohort) had not identified actions to apply the information learned to his/her work; all others in both cohorts expressed agreement with the statement. Only 2 from the May cohort and 19 (over half) of the March cohort indicated that they would apply the ERCIP training to a state or national certification (See Figure 15).

Figure 14. ERCIP Evaluation Findings

	March (n=34)	*May (n=9)*
My understanding of the subject matter has improved as a result of having participated in this training. (Level 2)	34 (100%)	9 (100%)
I have identified actions I will take to apply information I learned from this training in my work. (Level 1)	33 (97.1%)	9 (100%)
The information was presented in ways I could clearly understand. (Level 1)	34 (100%)	9 (100%)
I was satisfied with this training/course overall	34 (100%)	9 (100%)
The learning objectives were met by this training.	34 (100%)	9 (100%)

Figure 15. ERCIP Evaluation Findings

	March (n=34)	*May (n=9)*
I will apply this training to a state or national certification	19 (55.8%)	2 (22.2%)

All of the ERCIP participants that provided ratings for their instructors (n=34 in March and n=9 in May), (100%) agreed or strongly agreed that their instructors were well-prepared, knowledgeable, enthusiastic, easily understood, and that they encouraged questions and class participation (See Figure 16).

Figure 16. ERCIP Instructor Ratings

	March instructors		*May instructors*	
The instructor was…	Eckhouse	Miller	Eckhouse	Miller
Well-prepared	34 (100%)	34 (100%)	9 (100%)	9 (100%)
Knowledgeable	34 (100%)	34 (100%)	9 (100%)	9 (100%)
Enthusiastic	34 (100%)	34 (100%)	9 (100%)	9 (100%)
Easily understood	34 (100%)	34 (100%)	9 (100%)	9 (100%)
Encouraged questions & participation	34 (100%)	34 (100%)	9 (100%)	9 (100%)

Three participants in the May cohort offered comments on the course and indicated that training overall was very useful, especially the final exercise, resources, and feedback from the instructors and students. They also felt engaged and appreciated the use of humor. One suggested adding more games or group interaction as those strategies seemed useful for helping everyone understand the training content. The evaluation findings and comments indicate that the training was effective at levels 1 and 2.

To stay current on his own emergency preparedness skills and to support his work on the ERCIP course, the LPHI Program Manager completed the Homeland Security Exercise and Evaluation program (HSEEP) training offered by MEMA in FY18.

6. MHOA Sessions[9]

The LPHI was responsible for organizing five sessions at the November 2017 MHOA conference. The sessions, chosen for their relevance to local public health, were as follows: *Until Help Arrives* (n=36), *Americans with Disabilities Act (ADA) Compliance on Behalf of People with Access and Functional Needs* (n=43), *Service Animals in Disaster Response* (n=57), *Syndromic Surveillance and All Animals* (n=37), *Counter-Terrorism Readiness: It is Time* (n=63) and *Managing Spontaneous and Unaffiliated Volunteers* (n=53). All participants completed evaluation forms for the sessions to provide data on their professional roles, level of agreement with a series of statements about the sessions, and whether they will apply the data to certification, whether the work for a state, federal or otherwise recognized Native American tribal government, and whether they work in primary care, a medically-underserved area, or rural area. Because a separate detailed report of findings was not created for this training, the evaluation details are provided below.

As shown in Figure 17 below, the two groups with the highest level of representation across all five sessions were local health directors/agents (between 25 and 57.1%) and public health nurses (17.6 and 25%). With the exception of the Service Animal session, over half of participants indicated that they would use the sessions for certification. Four or fewer participants in each session indicated that they work for a Native American tribal government, in primary care, or in a medically underserved area. A slightly higher number (up to 11) indicated that they work in a rural area. The majority of participants

[9] These sessions, which are not standard LPHI offerings, are not included in the competency table nor are the number of participants in unduplicated user counts for the LPHI for FY18.

(80% or more) expressed agreement (agree or strongly agree) with four statements about training and indicated that the training improved their understanding of the subject matter, the information was presented clearly, they were satisfied overall, and the learning objectives were met. With the exception of the Managing Volunteers session, the majority (85-100%) also agreed that they had identified actions to apply the information learned in the session to their work. Although lower than in the other sessions, 59.4% of those in the Managing Volunteers session identified actions to apply the information to their work. The evaluation findings indicate that participants were satisfied with the sessions (level 1) and believe their knowledge increased as a result of their participation in each (level 2).

Figure 17. Professional Roles of MHOA Conference Participants

	Until Help Arrives (n=36)		American's with Disabilities (n=43)		Service Animals (n=57)		Unaffiliated Volunteers (n=53)		Counter Terror (n=63)		Surveillance (n=37)	
	#	%	#	%	#	%	#	%	#	%	#	%
Administrative Assistant	1	2.8%	2	5.9%	2	4.5%	1	2.5%	1	2.0%	1	3.0%
Administrator/Clerk	1	2.8%	2	5.9%	1	2.3%	2	5.0%	2	4.1%	0	0.0%
BOH Member	3	8.3%	3	8.8%	4	9.1%	3	7.5%	2	4.1%	2	6.1%
Local Health Director/Agent	9	25.0%	13	38.2%	19	43.2%	19	47.5%	28	57.1%	14	42.4%
EH Inspector/ Specialists/Sanitarians	3	8.3%	5	14.7%	1	2.3%	5	12.5%	1	2.0%	6	18.2%
Healthcare	0	0.0%	0	0.0%	5	11.4%	0	0.0%	4	8.2%	0	0.0%
Inspectional Services & other depts.	1	2.8%	0	0.0%	0	0.0%	0	0.0%	1	2.0%	0	0.0%
MDPH	0	0.0%	1	2.9%	0	0.0%	0	0.0%	0	0.0%	1	3.0%
Private Industry	0	0.0%	2	5.9%	3	6.8%	1	2.5%	0	0.0%	1	3.0%
Program Managers	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Public Health Coordinators	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Public Health Nurse	9	25.0%	6	17.6%	9	20.5%	9	22.5%	9	18.4%	6	18.2%
Public Safety	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
School Nurse	1	2.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Social Services	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Students	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	6.1%
Other (fill in):	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	2.0%	0	0.0%
I am using this session for certification (such as the RS, CHO or RN credentials).	15	53.6%	19	55.9%	25	43.9%	18	45.0%	28	57.1%	22	66.7%
I am currently working for a State, Federal or otherwise recognized Native American tribal government	0	0.0%	1	2.9%	3	5.3%	2	5.0%	1	2.0%	1	3.0%
I work in a primary care setting.	4	14.3%	0	0.0%	1	1.8%	1	2.5%	2	4.1%	1	3.0%
I work in a medically underserved area.	4	14.3%	1	2.9%	1	1.8%	1	2.5%	3	6.1%	2	6.1%
I work in a rural area.	2	7.1%	5	14.7%	11	19.3%	6	15.0%	10	20.4%	6	18.2%

Figure 18. Common Metrics from MHOA Conference Participants

	Until Help Arrives (n=36)		American's with Disabilities (n=43)		Service Animals (n=57)		Unaffiliated Volunteers (n=53)		Counter Terror (n=63)		Surveillance (n=37)	
	#	%	#	%	#	%	#	%	#	%	#	%
My understanding of the subject matter has improved as a result of having participated in this training.	28	100.0%	32	94.1%	45	100.0%	30	93.8%	48	94.1%	33	82.5%
I have identified actions I will take to apply information I learned from this training in my work.	28	100.0%	31	91.2%	43	95.6%	19	59.4%	43	84.3%	34	85.0%
The information was presented in ways I could clearly understand.	28	100.0%	33	97.1%	45	100.0%	28	87.5%	49	96.1%	38	95.0%
I was satisfied with this training overall.	28	100.0%	33	97.1%	45	100.0%	26	81.3%	49	96.1%	34	85.0%
The learning objectives were met by this training	27	96.4%	32	94.1%	43	95.6%	27	84.4%	47	92.2%	36	90.0%

D. Communications and Marketing

The LPHI developed a marketing and communications plan to achieve the outcomes of: *(1) Increased awareness of the LPHI and its programs; and (2) Increased registration for LPHI trainings.* In FYI8, the LPHI issued five newsletters to nearly 1,000 people, including LSAC and the Coalition for Local Public Health members as well as a 900+ person distribution list that the LPHI maintains. The newsletters described LPHI progress and upcoming events. The LPHI also produced and disseminated flyers and/or tailored training cards and course lists at conferences. An Emergency Preparedness certificate program postcard was handed out at a Region 5 HMCC meeting and at both Emergency Risk Communications classes. Tailored training cards and course lists were developed for each of three conferences. For example, for the MAPHN conference, where the target audience was nurses, the LPHI developed a card on population health and listed courses relevant to nurses. For Health Officers, the LPHI disseminated cards on Environmental Health and Emergency Preparedness at the MHOA conference. At the New Hampshire emergency preparedness conference in June, the LPHI developed tailored lists of courses highlighting the LPHI's emergency preparedness courses and a tailored emergency response certification card for an audience broader than only Massachusetts.

The LPHI attended four conferences in FY18, including the Yankee and the New Hampshire Emergency Preparedness Conference, and MHOA and MAPHN annual meetings. At these events, the LPHI staffed an information table and distributed LPHI marketing materials.

Example of tailored training card

In FY18, the LPHI maintained its online calendar of trainings and downloadable year-at-a-glance calendar of LPHI events and other Massachusetts and national events, including opportunities available through the CLPH, OLRH, OPEM, and the Western Massachusetts Public Health Association. The LPHI also promoted its offerings in the newsletters of MAPHN, MHOA, MEHA, DelValle, and the OLRH.

In FY18, the LPHI promoted its work through two publications and one national conference presentation. The LPHI Program Manager was a contributing author on a paper on the implications of cross-jurisdictional resource sharing in local health on services, quality, and cost[10] and another on building professionalism through management training.[11] The LPHI also had an abstract on measuring

[10] Humphries DL[1], Hyde J[2], Hahn E[1], Atherly A[3,4], O'Keefe E[1], Wilkinson G[5], Eckhouse S[6], Huleatt S[7], Wong S[8], Kertanis J. (2018). Cross-Jurisdictional Resource Sharing in Local Health Departments: Implications for Services, Quality, and Cost. Front Public Health. 2018 Apr 26;6:115.

[11] MacVarish K[1], Kenefick H, Fidler A, Cohen B, Orellana Y, Todd K. (2017). Building Professionalism Through Management Training: New England Public Health Training Center's Low-Cost, High-Impact Model. J Public Health Manag Pract. 2017 Oct 5.

the impact of the joint LPHI/NEPHTC management program on trainees' workplace performance accepted to present at the 2018 NACCHO conference.

IV. Conclusions and Recommendations

FY18 was a productive year for the LPHI. The LPHI engaged in productive partnerships, inducted new fellows into the LPHI Fellows Program, responded to most of the recommendations that came out of the FY17 needs assessment, conducted regular marketing of the LPHI and its offerings to the target audience, published papers and presented at a national conference to showcase LPHI initiatives, and delivered training to 950 individuals that addressed all 17 program areas, as well as 10 cross-cutting and four emergency preparedness competencies. Based on the findings presented in this report, there are a few recommendations the LPHI program manager should consider over the next year:

1. The LPHI should consider conducting additional marketing of the OYT trainings to practitioners in HMCC Regions 1 and 3 (where utilization was lowest) and, as part of future needs assessment efforts, ensure that the constellation of OYT trainings meet the needs of practitioners in those regions.
2. The LPHI should build upon the modest increase in BOH members who used OYT trainings in FY18 by conducting additional marketing about the availability and value of these trainings to BOH members.
3. With regard to the MAPHIT training, the LPHI should review the feedback about the classroom training in the full evaluation report and determine which steps, if any, may be necessary to reduce confusion and ensure all trainees, regardless of field experience, are able to understand the material. Additionally, the LPHI should review and address the navigation and use issues associated with the virtual house component of the program.
4. For the management course, the LPHI should consider the feasibility of additional and/or more in-depth training to address fiscal/budget issues, supervision and staff development, and interagency collaboration, as well as offering opportunities for increased participant interaction and relationship building (e.g., a community of practice).
5. For the ERCIP training, the instructors may wish to consider additional games or group interaction given how useful those seem to have been in helping trainees understand the training content.

Appendix A: Local Public Health Institute (LPHI) of Massachusetts Logic Model

Mission: To provide and ensure a competent workforce by strengthening and sustaining the capacity of local boards of health to prepare for and respond to public health issues and emergencies and to promote the health of residents of the Commonwealth.

Problems/resources	LPHI objectives	Outputs	Short-term outcomes
A group of individuals that understands the needs of local public health and that represents various segments of the workforce and geographic areas of the Commonwealth is needed to advise MDPH and others (e.g., DEP, MEMA) about how to most effectively achieve the LPHI mission.	Rebuild and convene a highly functioning Advisory Committee	✓ # of associations represented ✓ # of regions represented ✓ # of academic partners represented ✓ # of meetings ✓ Production/adoption of operating principles	Strengthened partnerships among public health and academic partners to ensure that LPHI trainings and programs are aligned with the learning priorities of the LPH workforce and are of high quality.
The LPH workforce may not possess the capabilities needed to prepare for and respond to emerging public health issues and emergencies. Training is needed to ensure the LPH workforce has the competencies necessary to protect the health of MA residents.	Provide training courses and education programs on PH and EP competencies	✓ # of trainings and programs ✓ # of competencies covered in trainings/programs ✓ # of registrants and # of participants (total, by region, role)	Increased numbers of LPH workforce members trained on cross-cutting, program area and emergency preparedness competencies
In order to use the available resources effectively and provide the LPH workforce with needed training, we must understand their training needs, assess which trainings are available to meet their needs, and develop training to address the gaps.	Assess workforce competencies and training needs	✓ Completed first draft of competency report ✓ Completed gap analysis and inventory of available trainings	Improved understanding of the trainings needs of LPH and the trainings that exist and those that are needed.
To maximize resources we should collaborate with others who have a vested interest in strengthening the LPH workforce	Build partnerships	✓ # of partners and collaborative projects	Increased educational offerings and collaborative projects
Geographic distances, staffing shortages at the local level, and scheduling challenges present significant obstacles when it comes to accessing classroom training. Tremendous technological resources exist that will enable the LPHI to address these obstacles by offering a more convenient avenue for training using web-based technology. The LPHI should determine appropriate uses for distance education and increase its use accordingly.	Increase capacity for distance education	✓ # of trainings or programs with a distance education component	Increased participation in LPHI offerings across all regions
Although the LPHI offers tremendous opportunities for improving the skills and knowledge of the LPH workforce, too few people know about the LPHI or its offerings. The LPHI needs an effective communications and marketing plan to address this problem.	Have an effective communications and marketing plan	✓ A developed plan for marketing the LPHI and its offerings ✓ Explore incentives for training ✓ # of newsletters and calendars	Increased awareness of the LPHI and its programs Identify and utilize incentives when feasible Increased registrations for LPHI trainings

Primary level Outcome:

Improved cross-cutting, program area and emergency preparedness competencies among the local public health workforce who have received training from the LPHI.

Secondary Level Outcome:

Improved agency performance in areas related to competencies in which agency personnel have been trained by the LPHI.

Appendix B. Crosswalk of Professional Roles of those using LPHI Trainings

LPHI Professional Role Options:	Categorized as:
Admin Assistant	Public Health
Administrator/Clerk	Public Health
BOH Member	Public Health
Local Health Director/Agent	Public Health
EH Inspector/Specialists/Sanitarians	Public Health
Healthcare	Other
Inspectional Services & other depts.	Public Health
MDPH	Public Health
Other	Other
Private Industry	Private Industry
Program Managers	Public Health
Public Health Coordinators	Public Health
Public Health Nurse	Public Health
Public Safety	Other
School Nurse	Other
Social Services	Other
Students	Students