

North Carolina Preparedness Coordinators Online Tool Kit

Evaluation Report

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THE NORTH CAROLINA
Institute for Public Health

Introduction

This report describes an evaluation of the North Carolina Preparedness Coordinators Online Tool Kit, a project of the Preparedness and Emergency Response Learning Center (PERLC) at the North Carolina Institute for Public Health (NCIPH) at the University of North Carolina (UNC). The evaluation was conducted in August, 2013. The NC Preparedness Coordinators Online Tool Kit project was a collaborative effort between NCIPH who provided instructional design, curriculum development and web design expertise, and the North Carolina Public Health Preparedness and Response Branch (PHP&R) at the North Carolina Division of Public Health, which provided subject matter expertise and expert review of Tool Kit content. North Carolina local health department preparedness coordinators helped pilot materials as they were developed. Funding was provided by the Centers for Disease Control and Prevention through the UNC PERLC.

Background

In North Carolina, Preparedness Coordinators (PCs) are responsible for improving the capacity of local health departments (LHDs) to plan for and respond to public health emergencies. There is no standardized training for the PC position and since PCs are often assigned additional roles at LHDs, many have limited time to seek out appropriate trainings and other resources to assist them in their responsibilities.

In 2011, CDC issued the national Public Health Preparedness Capabilities to serve as a national public health preparedness standards and to provide a guide for state and local jurisdictions a which impacted the roles and responsibilities for public health preparedness staff, including NC PCs.

To address the ongoing need for trainings and resources for PCs, NCIPH developed the online NC Preparedness Coordinators Tool Kit. The Tool Kit is intended as a training and resource guide to aid PCs and other LHD staff in meeting core public health preparedness responsibilities.

Tool Kit Development

In 2012, UNC and PHP&R partners identified 10 topics in which training and resources were most requested by PCs and LHD staff. On the Tool Kit web site, materials for each topic area were organized by menu tabs. Each topic tab was subdivided into 3 categories: trainings for PCs; resources for PCs; and trainings for LHD staff. The Tool Kit also includes resources for each topic, such as links to helpful websites and state-specific maps, forms, and handouts. UNC and PHP&R leveraged 13 existing trainings on the requested topics that had been developed for external partners, and adapted them for a North Carolina-specific audience. The trainings are mapped to both the national Public Health Preparedness Capabilities as well as to national competency sets for preparedness and other areas as appropriate. NCIPH and PHP&R also populated the Tool Kit with trainings developed by other PERLCs and training providers.

Pilot Testing. Prior to launching the Tool Kit, NCIPH carried out a pilot test to gather reactions to Tool Kit content and usability, as well as feedback on the 13 adapted training modules. In February 2013, five

participants (state, regional and local health department preparedness staff) completed the pilot. Feedback provided by the pilot participants was used to modify the Tool Kit prior to a statewide launch in March, including: explaining acronyms, adding training times, and providing additional topic-related resources and handouts. In addition, a feedback survey was created for each Tool Kit tab for users to notify UNC of any outdated or new material and checklists were developed to help PCs and LHD staff track completed trainings in each tab.

Tool Kit Launch. The NC Preparedness Coordinators Online Tool Kit was launched in March 2013. The PHP&R Branch sent an email notification about the Tool Kit to the statewide listserv for NC PCs. NC PCs also were notified through regional PHP&R team meetings and conference calls.

Purpose of this Evaluation

The purpose of this evaluation is to assess the utilization of the Tool Kit by NC PCs and the influence of the Tool Kit on NC PCs' ability to do their jobs. In addition, the evaluation was intended to assess whether the Tool Kit influenced program, policy, or system level change at NC LHDs. The evaluation also provides feedback to NCIPH staff for improvement of the Tool Kit. The details of the evaluation were submitted to the Non-Biomedical Institutional Review Board at the University of North Carolina and it determined that the evaluation was exempt from IRB review.

Evaluation Framework and Design

The Kirkpatrick Model for Evaluating the Effectiveness of Training Programs (Kirkpatrick 2005) was used to frame the evaluation. Kirkpatrick's Model aims to evaluate training effectiveness on the basis of four criteria, or levels, as described below. This evaluation addressed each level as well as assessing utilization of the Tool Kit by NC PCs.

- Level 1 (Reaction): How did participants react to the program? How can the training be improved?
- Level 2 (Learning): To what extent did participants improve knowledge and skills as a result of the training?
- Level 3 (Behavior): To what extent did participants alter their behavior upon return to the workplace as a result of the training?
- Level 4 (Results): What organizational benefits resulted from the training?

Evaluation Questions

- 1) Is the NC Preparedness Coordinators Online Tool Kit being used by NC PCs, and what is their reaction? (Level 1 Kirkpatrick)**
- 2) How has the Tool Kit influenced NC PCs' ability to do their job? (Level 2-3 Kirkpatrick)**
- 3) What, if any, agency-level change has occurred due to use of the Tool Kit? (Level 4 Kirkpatrick)**

Data Collection

Qualitative and quantitative evaluation data was collected using the following method. Six months after the launch of the Tool Kit, in August 2013, PHP&R sent a link to an online survey to all PCs in NC through the PC listserv. The 21-question survey was created using Qualtrics Survey Software and was designed to assess Tool Kit utilization, use of skills or knowledge gained from the Tool Kit on the job, Tool Kit contribution to increase in individual preparedness capabilities, Tool Kit impact on agency, barriers and supportive factors to use, and suggestions for improvement.

Evaluation Limitations

The data collection method was based on respondent self-report through an online survey. This type of data collection can be subject to measurement error such as social desirability bias - the tendency of respondents to over-report positive behaviors. This bias may mean that some respondents over-reported use or utility of the Tool Kit. Another potential source of error is non-response error - the possibility that the participants who did not respond are significantly different than the participants who did respond. Because the response rate was 43%, it is unknown whether more than half of the PCs in NC have utilized the Tool Kit or believed that it was useful, and their views may be very different than the 43% who responded.

Evaluation Findings

The results of the evaluation are presented below. The survey response rate and participant characteristics are described, followed by evaluation results organized by evaluation question.

Survey Response Rate. The survey link was sent to 84 PCs in NC. Thirty-six respondents from 36 counties in NC completed the survey for a response rate of 43%.

Participant Characteristics. Thirty-two respondents identified themselves as Preparedness Coordinators and four respondents indicated they were not PCs (pharmacist, planning consultant, health director, assistant PC). The majority (26, 72%) had worked in public health preparedness for less than 5 years, 25% had worked for 6-10 years, and one respondent had worked more than 10 years in public health preparedness.

Evaluation Question 1: Is the PC Tool Kit being utilized by NC PCs, and what is their reaction?

Number of NC PCs using Tool Kit in past 6 months

Of 36 survey respondents, 21 (58%) had used the Toolkit in the six months since it became available in March 2013.

Frequency of use

Of the 21 respondents who had used the Tool Kit, 70% (15) had used the Tool Kit less than a month, 19% (4) had used the Tool Kit 1-3 months, and 10% (2) had used the Tool Kit 3-6 months.

Types of PC information used most often

Eighty-one percent (17) of users identified Planning as the Tool Kit tab used most often, followed by the Exercises tab (67% or 14 users had used it most often). See Table 1 below.

Table 1. Participant Use of Tool Kit Tabs (Topics)

Tool Kit tab used most often	Number	Percent
Planning	17	81%
Exercises	14	67%
Medical Countermeasures Management	7	33%
Communication	7	33%
Introduction	6	29%
Legal Issues	3	14%
Partners and Volunteers	2	10%
Disaster Epidemiology	2	10%
Responder Health and Safety	1	5%
Disaster Behavioral Health	0	0%

Reasons for not using the Tool Kit

Of the 15 respondents who had not used the Tool Kit, the reasons cited most often were “lack of time” (40% or 6 respondents) and “did not know about Tool Kit” (33% or 5 respondents). No respondents cited the reasons “not directly related to my job duties” or “lack of incentives for use.”

Facilitators of use

Respondents were asked the question, “What would encourage you to make more use of the Tool Kit? Of the 14 respondents, 36% (5) cited knowing about the Tool Kit, followed by 29% (4) who stated that they would use it and 21% (3) who needed more time.

Suggestions for improvement

Five respondents indicated a number of ways, both technological and content-related, in which the Tool Kit could be improved. These include the following:

- Make the site more user-friendly, updated dated info, fix broken resource links
- Develop a mobile app to be easily accessible on-the-go or in meetings
- Add a section for all hazards planning (weather, terrorism, etc.)
- Create an oversight panel of local health department preparedness coordinators to regularly suggest updates

Evaluation Question 2: How has the Tool Kit influenced NC PCs' ability to do their job?

Use of new skills/knowledge on the job

Tool Kit users were asked to specify how they had used new skills or knowledge from the Tool Kit on the job. Of the 21 respondents, 38% (8) had used it during daily activities, 33% (7) had used it during monthly activities, and 19% (4) had used it during an emergency exercise or drill. No Tool Kit users had used skills or knowledge acquired from the Tool Kit during an emergency response.

Tool Kit facilitation of job responsibilities

Sixty-two percent (13) of participants responded that the Tool Kit had helped them to perform new job responsibilities. Ten respondents cited four ways the Tool Kit had helped them as noted in Table 2 below.

Table 2. Tool Kit Facilitation of Job Responsibilities

How PC Tool Kit has helped to perform new job responsibilities	Number of respondents
Overall Preparedness understanding, continued education, or incorporation of new ideas	4
Orientation/information for new PCs	3
Helpful for exercises	1
Helpful for writing plans	1

Tool Kit influence on participant practice of public health preparedness

Respondents were asked to rate the degree to which the Tool Kit influenced their practice of public health preparedness. The majority (62% 13 respondents) chose "To Some Extent" while 4 respondents (19%) chose less influence ("Not at all" or "To a Little Extent") and 4 respondents (19%) indicated that the Tool Kit had influenced their practice "To a Great Extent" or "To a Very Great Extent."

Tool Kit influence on Public Health Preparedness (PHEP) capabilities

Respondents using the Tool Kit (n = 21) were asked how much the Tool Kit contributed to their ability to address functions, tasks, or performance measures for the 15 PHEP capabilities. Mean scores for each PHEP capability are presented below in Table X, based on a scale of 1 = "Not At All," 2 = "To a Little Extent," 3 = "To Some Extent," 4 = "To a Great Extent," and 5 = "To a Very Great Extent." The means ranged from 2.38 (Fatality Management and Public Health Laboratory Testing) to 3.05 (Community Preparedness and Medical Materiel Management and Distribution).

Supportive factors for implementing Tool Kit knowledge/skills

Respondents noted several supportive factors for implementing what they had learned in the Tool Kit into the workplace. Table 3 below summarized these factors. The answer cited most often, by 52% (11) of respondents, was "Directly related to my job duties."

Table 3. Supportive Factors for Implementing Tool Kit Knowledge/Skills

Supportive Factor	Number	Percent
Directly related to my job duties	11	52%
Supervisor support	5	24%
Access to appropriate technology, supplies, and/or equipment	5	24%
Time to implement	3	14%
Organizational policy	3	14%
None	3	14%
Timely, constructive, and supportive feedback	2	10%
Incentives for good performance	0	0%

Barriers to implementing Tool Kit knowledge/skills

Respondents also indicated a number of barriers to implementing knowledge gained from the Tool Kit into the workplace. Table 4 summarized the barriers. The barrier cited most often, by 71% (15) of respondents, was “Lack of time to implement.”

Table 4. Barriers to Implementing Tool Kit Knowledge/Skills

Barrier	Number	Percent
Lack of time to implement	15	71%
None	3	14%
Lack of supporting organizational policy	2	10%
Lack of timely, constructive, and supportive feedback	1	5%
Not directly related to my job duties	1	5%
Lack of incentives for good performance	1	5%
The site is not user friendly	1	5%
Lack of supervisor support	0	0%
Lack of access to appropriate technology, supplies and/or equipment	0	0%

Evaluation Question 3: What, if any, agency-level change has occurred due to use of the Tool Kit?**Influence on agency of participants' change in practice from Tool Kit**

Respondents were asked to elaborate on how the change in their practice due to the Tool Kit had impacted their agency. A summary of the answers is presented in Table 5. Of the 15 participants who responded, the answer cited most often (by 33% or 5 respondents) was that increased knowledge or resources from the Tool Kit had facilitated job performance.

Table 5. Tool Kit Influence on Agency Through Participant Change in Practice

How change in practice from Tool Kit has affected	Number	Percent
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agency		
Facilitated PC job performance	5	33%
None/no change yet	4	27%
Helped with staff training/new employee orientation/Epi team training	3	20%
Agency better understands PC role	1	1%
Sharing information with partners	1	1%
Helped with agency plans	1	1%

Change in agency due to trainings/resources offered in Tool Kit

Respondents were asked to choose ways in which their agency was influenced by the trainings and resources offered in the Tool Kit. Table 6 below summarized the answers. Twelve respondents (57%) indicated that there was no change. The answer chosen most often by the 9 respondents who indicated agency change was “Included new/additional trainings in its training plan.”

Table 6. Change in Agency as a Result of Tool Kit Trainings/Resources

Change in agency	Number	Percent
None/no change yet	12	57%
Included new/additional trainings in its training plan	7	33%
Changed its policies based on knowledge learned from the trainings respondent completed	3	14%
Required trainings within the organization for certain staff	2	10%
Revised standard operating procedures based on knowledge learned from the trainings respondent completed	2	10%

Organizational, program, systems or policy change influenced by Tool Kit

Of 21 respondents, 8 (38%) indicated that they knew of an organizational, policy, systems or program change that they had influenced and the Tool Kit had contributed to in some way. Another eight respondents could not think of a change, and 5 (24%) weren’t sure. Seven respondents elaborated on the type of change, described below.

- Change in systems with an increase in collaborations and partnerships to address gaps
- Helped to change plans in the policy of the agency and in the county’s emergency operations plan
- Staff are better able to understand their roles in emergencies
- Improved training for Epi team members
- Broader spectrum of training options to be included in upcoming SNS, LRS, and POD staff training
- Updated POD and SNS plan

Positive impact of Tool Kit on public health preparedness in county/region

Ninety percent (19) of respondents indicated that their use of the Tool Kit had a positive impact on public health preparedness in their county or region. When asked to elaborate, respondents gave the following answers.

- A great tool for starting a preparedness career
- Broadened knowledge of preparedness
- Helped in planning and changing policies
- Validated job duties
- Helpful to have a central location for a variety of topic areas
- Partners and staff better able to understand/provide input on roles
- Allows more options for training staff, including orientation

Conclusions

The NC Preparedness Coordinators Tool Kit has been disseminated to NC PCs. Six months after Tool Kit launch, at least a quarter of NC PCs have utilized the Tool Kit, but the majority have used it for less than a month. Overall, the Tool Kit appears to be useful for NC PCs, contain appropriate content, and has begun to help PC perform preparedness-related job duties. However, the low response rate and small number of PCs responding to the survey and utilizing the Tool Kit make drawing solid conclusions problematic and these findings should be considered preliminary. More specific conclusions about Tool Kit use, participant reaction to Tool Kit, Tool Kit effect on job skills and knowledge, and Tool Kit effect on LHDs are presented below.

Utilization of Tool Kit and Reaction

- The majority of respondents used the Planning and Exercises topics most often; other topics were accessed as well with the exception of Disaster Behavioral Health.
- The majority of survey respondents who had not used the Tool Kit cited lack of time and not knowing about the Tool Kit as the main reasons.
- Tool Kit users noted four key areas for improvement: 1) technological fixes (update info, correct broken links, improve user friendliness of site); 2) add content (e.g., a section on all-hazards planning); 3) develop a mobile app; and 4) create an oversight panel of NC PCs to suggest updates.

Tool Kit Influence on NC PC Job Abilities

- On the job, a little over a third of respondents had used the Tool Kit information during daily activities; a third had used it during monthly activities, and a smaller percentage had used it

during an emergency exercise. No users had used Tool Kit information during an emergency response, but that may have been due to lack of opportunity.

- The majority of Tool Kit users indicated that the Tool Kit had helped them perform new job responsibilities and influenced their practice of public health preparedness to some extent. More specifically, Tool Kit users indicated that on average, the Tool Kit had influenced their ability to address 15 established public health capabilities somewhere between a little extent and some extent.
- Supportive factors for implementing knowledge and skills gained from the Tool Kit included material being directly related to job duties, supervisor support, and access to appropriate technology and equipment; the main barrier was lack of time to implement knowledge/skills.

Tool Kit Influence on Agency-Level Change

- At this point, the Tool Kit appears to have had some influence on LHDs by facilitating PC job performance and staff preparedness training. The Tool Kit has also helped with development and revision of agency plans, policies and procedures.
- Further roles for the Tool Kit include facilitating information sharing with LHD preparedness partners and clarifying PC and staff preparedness roles in the LHD and the county/region.

Recommendations

- Ensure that all PCs in NC are aware of the Tool Kit and how to access it. Because PCs are short on available time for training, it may be helpful to disseminate specific ways that the Tool Kit can help PCs perform their PC duties. Testimonials from Tool Kit users posted on the web site and disseminated through the PC listserv may be useful as well.
- To enable more robust results and conclusions regarding Tool Kit use and potential improvements, conduct another evaluation in six months – one year, ensuring that the response rate from NC PCs reaches at least 70% through the use of reminders and possibly incentives.
- Perform technological fixes and content updates to the Tool Kit web site on a regular basis.
- Consider creating an oversight or advisory committee to assist with content updates, marketing of the Tool Kit, and buy-in with NC PCs.

References

Kirkpatrick D and Kirkpatrick J. Transferring Learning to Behavior: Using the Four Levels to Improve Performance. San Francisco, CA: Berrett-Koehler Publishers, 2005.