

## Ready or Not? UConn Extension Disaster and Emergency Preparedness

### Abstract

We conducted an attitude and opinion survey of UConn Extension personnel regarding workplace and home emergency preparedness. Our primary focus was on cardiopulmonary resuscitation (CPR) and automated external defibrillators (AEDs). Respondents were aware of the benefits of knowing CPR, with a majority having taken a CPR course. Respondents were generally aware of the benefits of knowing how to use AEDs, but only a minority had had AED training. They indicated a preference for home over workplace preparedness training, although they recognized workplace preparedness as important. These findings suggest that emergency and disaster education be focused on home preparedness, which will result in workplace preparedness too.

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## Introduction

Everyone faces the potential of emergencies and disasters every day whether they are prepared or not (Kreps & Bosworth, 2007). Accordingly, the federal government developed a National Preparedness Goal and has defined National Preparedness Goal success as "a secure and resilient Nation with the capabilities required across the community to prevent, protect against, mitigate, respond to, and recover from threats and hazards that pose the greatest threats" (U.S. Department of Homeland Security, 2011, p. 1). Formal governmental emergency and disaster response and management education and planning has existed in the United States for about 110 years (Rubin, 2012). Yet as Haddow, Bullock, and Coppola (2014) stated, "Perhaps the most difficult component of emergency management preparedness training is the one that focuses on the general public" (p. 118).

Institutions of higher education are emerging as important actors in disaster preparedness and disaster relief assessment and education (Buschlen & Goffnett, 2013). The Cooperative Extension System has played a role in educating and motivating the public in emergency and disaster preparedness education for several decades

(Black 2012; Cathey, Coreil, Schexnayder, & White, 2007; Wiens, Evans, Tsao, & Liss, 2004), including related to aspects of homeland security (Washburn, 2006). Cooperative Extension has focused on a wide range of disaster and emergency preparedness programmatic areas. These include emergency first aid (Riddick, Gertsch, & Heasley, 1980); families, communities, and business (Warner & Galindo-Gonzalez, 2014); 4-H teen and community preparedness (Black & Powell, 2012); economic assessments in response to disasters (Fannin & Guidry, 2010); business contingency planning (Jepsen, Reshan, & Mann, 2013); farm preparedness and recovery (Marrison, 2009); disasters and communication (Kolich, 2014); and emergency exercise participation (Smith, Black, & Williams, 2012).

Notable is that the Cooperative Extension System institutionalized engagement in disaster education nationwide in 1979, as explained by Koch (1999):

The Extension Disaster Education Network (EDEN) helps CES faculty and staff share information related to emergencies. The informal organization is a model for Extension to develop other interdisciplinary collaborations across state lines and within states to meet needs with minimal investment of time and money. States are invited to join EDEN, and staff and the public are welcome to use the information offered through the cooperative Web site. (Abstract)

## Research Purpose

While Extension educators train and prepare their stakeholders for disasters and emergencies, it is important that Extension personnel prepare as well (Teig et al., 2008). Donahue and Tuohy (2006) pointed out that virtually all institutions, including academic ones, are susceptible to "lessons we Don't learn" (p. 1). We suggest that workplace disaster preparedness is regarded as important but that institutions commonly fail to prepare accordingly (Donahue & Fitzpatrick, 2010, 2012).

The University of Connecticut (UConn), including UConn Extension, is no different. Increasing the preparedness of faculty and staff will make more people safe and secure. In January 2015, UConn EDEN reconvened, with one of the four purposes being to improve workplace disaster and emergency preparedness. Included in this preparedness planning was a primary focus on basic life support (BLS) (Smawfield, 2013).

We conducted an attitude and opinion survey of UConn Extension personnel regarding workplace and home preparedness. We did this to assess BLS needs in the Extension workplace, with our primary focus being cardiopulmonary resuscitation (CPR) and automated external defibrillators (AEDs). Our secondary focus was on other forms of preparedness. We first hypothesized that UConn Extension personnel would be receptive to BLS training. We further hypothesized that UConn Extension personnel would be more receptive to learning BLS for family and home than for the workplace. The hypothesized outcome was that Extension personnel would be willing to learn and implement BLS at home, leading to workplace preparedness as an added value (Rontanz, 2007). Our findings will inform UConn Extension and UConn EDEN workplace and home preparedness education, especially concerning BLS, CPR, and AEDs.

## Research Methods

We based our survey research methods on current disaster and emergency research science. Too often, preparedness education programs are developed in the absence of a needs assessment and do not incorporate program evaluation outcomes (Few, McAvoy, Tarazona, & Walden, 2014). We developed an online survey using Qualtrics, a commercially available statistical analysis software suite (Qualtrics Research Suite, 2015).

Our overall survey research design followed Dillman's (2000) tailored design for Internet surveys. Our university's institutional review board cleared our human subject research methods following development of a research participant rights protocol.

Survey research questions were developed with guidance from Bradburn, Sudman, and Wansink (2004). We constructed five hypotheses to guide our research:

1. Extension personnel are informed and prepared for other emergencies in the workplace following natural/human-made disasters.
2. Extension personnel are trained in BLS (including CPR and use of AEDs) for emergency situations in the workplace.
3. Extension personnel are informed and prepared for emergencies at home and during travel following natural/human-made disasters.
4. Extension personnel are trained in BLS for emergencies at home and during travel.
5. Extension personnel's BLS training and preparedness for emergencies at home and during travel informs their workplace preparedness.

The survey contained 35 Likert scale questions with five response options that ranged from 1 (*strongly agree*) to 5 (*strongly disagree*), with "Don't care" and "not applicable" as other options. The survey contained three additional (non-Likert scale) questions with the response options "yes," "no," "maybe," "don't know," "don't care," and "not applicable."

UConn Extension administration provided the list of eligible personnel for the survey. We sent the first email survey to all personnel with UConn Extension appointments. Once a participant had returned the survey, we removed that participant from the email list so that he or she would not receive the survey again. There were three mailings total. The appointments included personnel at the eight county offices, the University of Connecticut main campus, and the Avery Point campus. The target audience included Extension administrators and staff, as well as faculty in academic departments (seven) with Extension appointment percentages ranging from 10% to 100%. We started with 137 online surveys and obtained a 45% response rate.

## Results

We found that respondents were aware of the benefits of CPR (Table 1), with a majority also having taken a CPR course in the past (Table 2). Only a minority of respondents stated that they thought of themselves as skilled in CPR (Table 1). An interesting finding was that a majority said they had taken a CPR course whereas 34% said they had not. Although respondents were aware of the benefits of an AED (Table 1), only 13% had taken a course on using one (Table 3). Respondents clearly believed that they should know how to perform CPR and use an AED (Table 1).

Most importantly, we found that participants would be willing to take courses in the level of BLS that involves the use of CPR and AEDs and that they would use CPR or an AED if needed (Table 1). They also believed that it is important that an AED be placed strategically at each county Extension center, with only 2% strongly disagreeing that this should occur (Table 1).

**Table 1.**

Participant Responses to Questions About Cardiopulmonary Resuscitation and Automated External Defibrillators in the Workplace

<b>Question</b>	<b>Strongly agree f (%)</b>	<b>Agree f (%)</b>	<b>Neutral f (%)</b>	<b>Disagree f (%)</b>	<b>Strongly disagree f (%)</b>	<b>No. of responses</b>	<b>M<sup>a</sup></b>	<b>SD</b>
1. I am aware of the benefits of my office colleagues and/or me knowing <i>Cardiopulmonary Resuscitation</i> (CPR).	26 (46%)	23 (40%)	5 (9%)	2 (4%)	1 (1%)	57	1.75	.89
2. I am aware of the benefits of my office colleagues and/or me knowing <i>Automated External Defibrillators</i> (AED).	20 (36%)	28 (50%)	5 (9%)	2 (4%)	1 (1%)	56	1.86	.86
3. I am skilled in CPR.	5 (9%)	7 (12%)	14 (24%)	20 (34%)	13 (21%)	59	3.57	1.33
4. I am skilled in the use of an AED.	4 (7%)	2 (4%)	5 (10%)	24 (44%)	19 (35%)	54	4.11	1.34
5. I should know CPR.	27 (45%)	26 (43%)	5 (8%)	0	2 (3%)	60	1.94	1.41
6. I should know how to use an AED.	18 (31%)	29 (50%)	9 (16%)	0	2 (3%)	58	2.05	1.18
7. I am willing to learn CPR if training is provided at my workplace.	27 (45%)	23 (38%)	8 (14%)	0	2 (3%)	60	1.98	1.43
8. If I knew CPR, I would act if needed.	25 (42%)	27 (45%)	6 (10%)	0	2 (3%)	60	1.89	1.18
9. If I knew how to use an AED, I would act if needed.	26 (46%)	21 (37%)	7 (12%)	1 (2%)	2 (3%)	57	1.91	1.26
10. There should be	21 (38%)	20 (36%)	14 (24%)	0	1 (2%)	56	2.24	1.11

an AED strategically placed in my Extension Center.

aLikert scale is 1 = *strongly agree* to 5 = *strongly disagree*.

**Table 2.**

Participant Responses to the Question "Have You Taken a Course in Cardiopulmonary Resuscitation?"

<b>Response</b>	<b>f</b>	<b>%</b>
Yes	41	66
No	21	34
Maybe	0	0
Don't know/remember	0	0
Total	62	100

**Table 3.**

Participant Responses to the Question "Have You Taken a Course in the Use of Automated External Defibrillators?"

<b>Response</b>	<b>f</b>	<b>%</b>
Yes	8	13
No	52	84
Maybe	2	3
Don't know/remember	0	0
Total	62	100

The majority of respondents indicated being aware that workplace preparedness for emergencies and disasters could help save their own or someone else's life (Table 4). They were generally uncertain whether their Extension center had emergency preparedness plans, with a majority also unsure whether there were preparedness training courses available to them (Table 4). However, respondents stated a preference for Extension centers having preparedness plans in place and indicated a willingness to participate in emergency and disaster preparedness training for Extension personnel at their Extension centers (Table 4). A minority of respondents had taken a preparedness course or preparedness courses, and a majority (83%) had not (Table 5).

















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