



Colorado Department
of Public Health
and Environment

Health Statistics Section

Alyson Shupe, Ph.D.,
Section Chief

Monica Clancy

Kieu Vu, M.S.P.H.

Maternal and Child Health

Surveillance Unit
Rickey Tolliver, M.P.H.,
Director

Janelle Mares

Irene Pinela

Public Health Informatics Unit

Chris Wells, M.S.,
Director

Geoff Bock

Doug Duncan

Gloria Mora

Jeff Scott

Bruce Straw

Paul Turtle

Survey Research Unit

Becky Rosenblatt, M.A.,
Director

Mark King

Michael Poisson

Ava Williams

Vital Statistics Unit

Mary Chase, Director

Kirk Bol, M.S.P.H.

Juanita Galvan

Yvonne Garcia

4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
(303)692-2160
(800)886-7689

health.statistics@state.co.us
www.cdph.state.co.us/hs/

Emergency Preparedness in Colorado: Results from the Behavioral Risk Factor Surveillance System

Michael Poisson

Chris Lindley, MPH, Director, Emergency Preparedness and Response Division

Introduction

In 2007, three questions were added to the Colorado Behavioral Risk Factor Surveillance System to assess the level of preparedness of Colorado residents in the event of a large-scale disaster or emergency. A large-scale disaster or emergency is defined as an event that leaves residents isolated in their homes, or displaced from their homes, for at least three days. This report summarizes some of the findings.

Methodology

The Colorado Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing health survey of Colorado adults ages 18 years and older. A total of 11,908 adults were interviewed in 2007. All households with landline telephones had a chance of being selected to participate in the survey, with individual survey respondents being randomly selected from each successfully contacted household.

The 2007 Colorado BRFSS included three questions on emergency and large-scale disaster preparedness. The first question asked whether the respondent was well prepared, somewhat prepared, or not at all prepared for an emergency or large-scale disaster. In addition, respondents were asked if they had a written evacuation plan, and if they had a 3-day supply of non-perishable food for each member of the household.

The three preparedness questions were asked of one half of the sample, for a total of 5,938 completed interviews. Variables were tested to determine if significant differences existed between the responses for various groups: ninety-five percent confidence intervals (CIs) were calculated, and significance was determined by examining overlap of the CIs between the prevalence estimates. Data were analyzed using SAS version 9.2.

Results

Emergency Preparedness

Table 1 shows that 19.5 percent of Colorado adults are not prepared at all for an emergency or large scale disaster. The data also indicate that 77.3 percent of Colorado adults do not have a written evacuation plan and 14.5 percent of Colorado adults do not have a 3-day supply of nonperishable food for each member of the household.

Table 1. Emergency preparedness - preparation, evacuation plans and food supply: Colorado BRFSS, 2007

	Not prepared at all		No evacuation plan		No 3-day food supply	
	Percent	(95% CI*)	Percent	(95% CI*)	Percent	(95% CI*)
All Adults	19.5	(18.1-20.8)	77.3	(75.7-78.9)	14.5	(13.0-15.9)
Sex						
Male	15.7	(13.8-17.7)	76.6	(74.1-79.1)	14.3	(12.1-16.6)
Female	23.2	(21.3-25.1)	78.0	(76.1-80.0)	14.7	(12.9-16.5)
Age Group						
18-44	21.6	(19.8-23.4)	78.5	(76.4-80.5)	16.0	(14.0-17.9)
45-64	15.8	(13.4-18.3)	77.1	(74.0-80.2)	11.0	(8.7-13.4)
65-74	12.5	(9.8-15.3)	72.1	(68.0-76.1)	8.6	(5.9-11.2)
75+	10.3	(7.5-13.1)	70.7	(66.2-75.2)	12.6	(9.3-15.9)
Race and Ethnicity						
White, Non-Hispanic	15.9	(14.6-17.2)	79.6	(78.0-81.2)	12.7	(11.2-14.2)
Black, Non-Hispanic	25.5	(16.3-34.6)	66.7	(55.4-77.9)	12.5	(5.3-19.6)
Hispanic	33.8	(29.2-38.3)	70.8	(65.6-75.9)	23.8	(18.6-29.1)
Language						
English	17.0	(15.7-18.3)	77.2	(75.6-78.8)	13.2	(11.9-14.5)
Spanish	48.3	(39.6-56.9)	79.2	(70.7-87.7)	35.3	(23.8-46.9)
Income						
<\$25,000	27.7	(23.5-31.9)	68.8	(64.0-73.5)	18.6	(14.0-23.1)
\$25-\$34,999	22.1	(17.4-26.8)	76.9	(71.7-82.1)	15.1	(9.7-20.4)
\$35-\$49,999	18.6	(15.2-22.0)	77.5	(73.6-81.5)	17.3	(13.2-21.3)
\$50,000+	16.0	(14.4-17.7)	81.4	(79.5-83.4)	11.7	(10.1-13.3)
Disability						
Disabled	21.1	(18.0-24.2)	74.9	(71.5-78.2)	13.9	(10.7-17.0)
Not Disabled	19.0	(17.5-20.5)	77.7	(75.9-79.5)	14.5	(12.9-16.2)
Region						
Urban	19.5	(18.1-21.0)	77.5	(75.8-79.2)	13.9	(12.5-15.4)
Rural	19.5	(15.5-23.4)	76.9	(72.7-81.1)	17.4	(12.0-22.8)
Frontier	16.8	(8.7-24.9)	79.0	(70.6-87.3)	14.6	(6.4-22.9)

*Confidence Interval

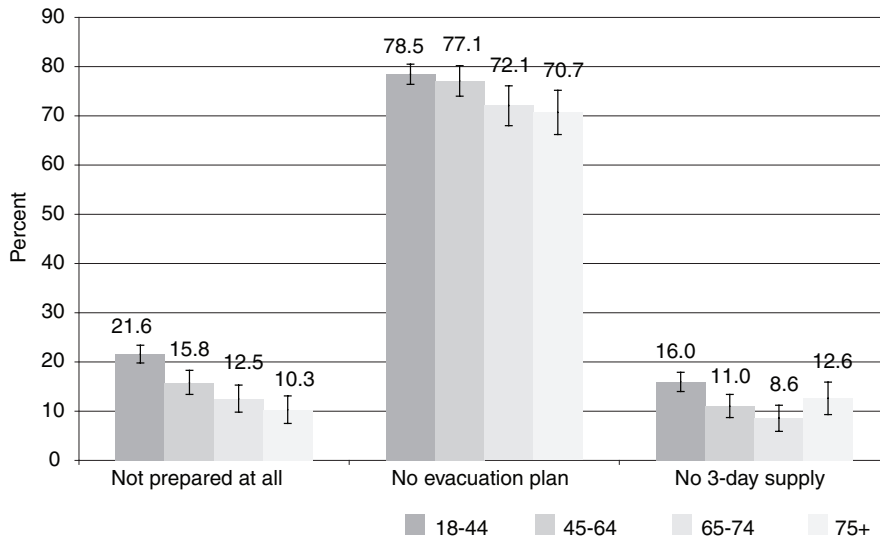
Age

Figure 1 shows that among 18-44 year-olds, 21.6 percent reported that they are not prepared at all for an emergency or large-scale disaster. This compares to 15.8 percent of adults 45-64 years of age, 12.5 percent of adults 65-74 years of age, and 10.3 percent of adults 75 and older.

Adults ages 18-44 also had the highest percentage (78.5%) without a written disaster evacuation plan, while those 75 and older have the lowest percentage (70.7%) that do not have a plan.

Adults ages 18-44 had the highest percentage (16.0) that do not have a 3-day supply of non-perishable food, and adults ages 65-74 have the lowest percentage (8.6%) that do not have a 3-day supply of non-perishable food.

Figure 1. Emergency preparedness by age of respondent: Colorado BRFSS, 2007

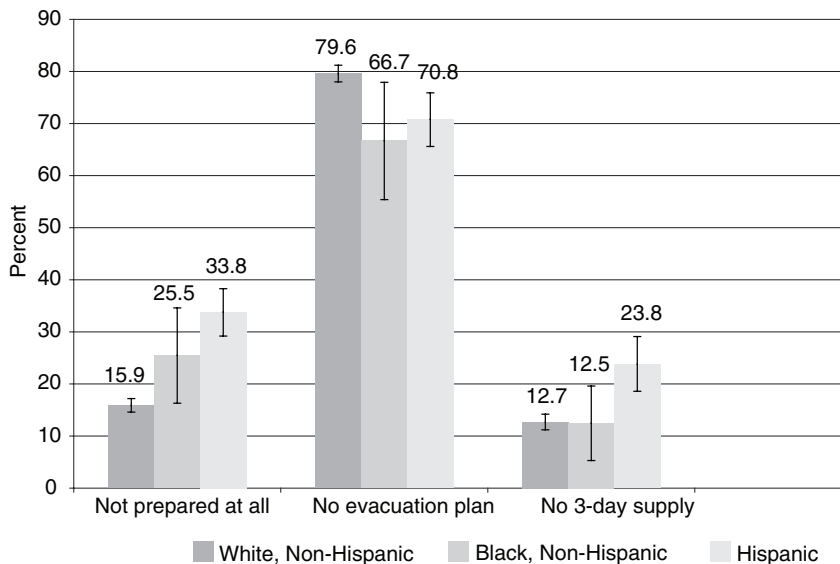


Race/Ethnicity

As shown in Figure 2, Hispanics had the highest percentage (33.8%) reporting that they are not prepared at all for an emergency or large-scale disaster. White, non-Hispanics had the lowest percentage (15.9%) reporting that they are not prepared at all for an emergency or large-scale disaster.

White, non-Hispanics (79.6%) had the highest percentage reporting that they do not have a written disaster evacuation plan, as compared to Hispanics (70.8%) and Black, non-Hispanics (66.7%). Hispanics had the highest percentage (23.8%) reporting that they did not have a 3-day supply of food, while Black, non-Hispanics had the lowest percentage at 12.5, but the difference is not statistically significant.

Figure 2. Emergency preparedness by race/ethnicity: Colorado BRFSS, 2007



Language

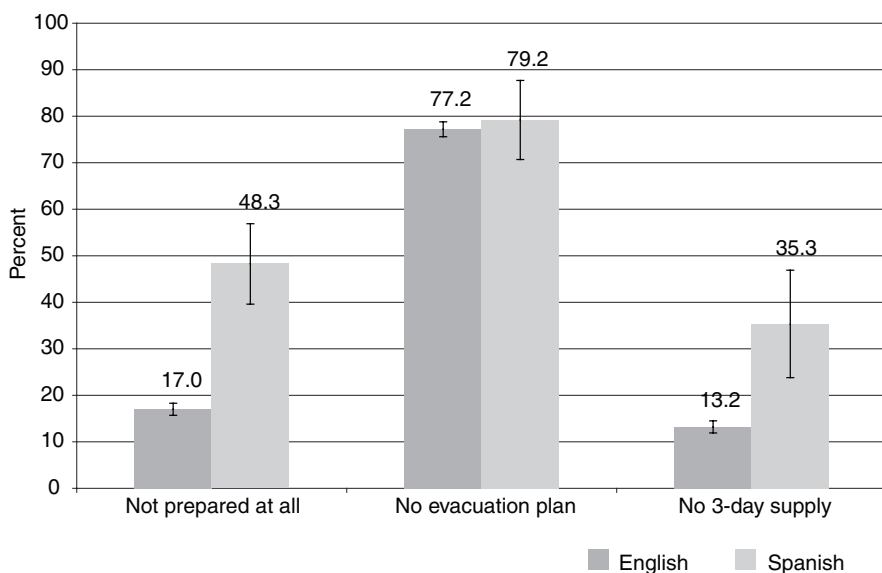
For this report, respondents who completed the survey in English are identified as English-speaking adults, while respondents who completed the survey in Spanish are identified as Spanish-speaking adults.

As shown in Figure 3, 17.0 percent of English-speaking adults reported that they were not prepared at all for an emergency or large-scale disaster. This compares to 48.3 percent of Spanish-speaking adults.

English-speaking adults reported a high percentage (77.2%) that did not have a written evacuation plan. An even higher percentage (79.2%) of Spanish-speaking adults did not have a written evacuation plan, but the difference is not statistically significant.

English-speaking adults reported a lower percentage (13.2%) that did not have a 3-day supply of non-perishable food for each member of the household, as compared to Spanish-speaking adults at 35.3 percent.

Figure 3. Emergency preparedness by language: Colorado BRFSS, 2007



Household Income

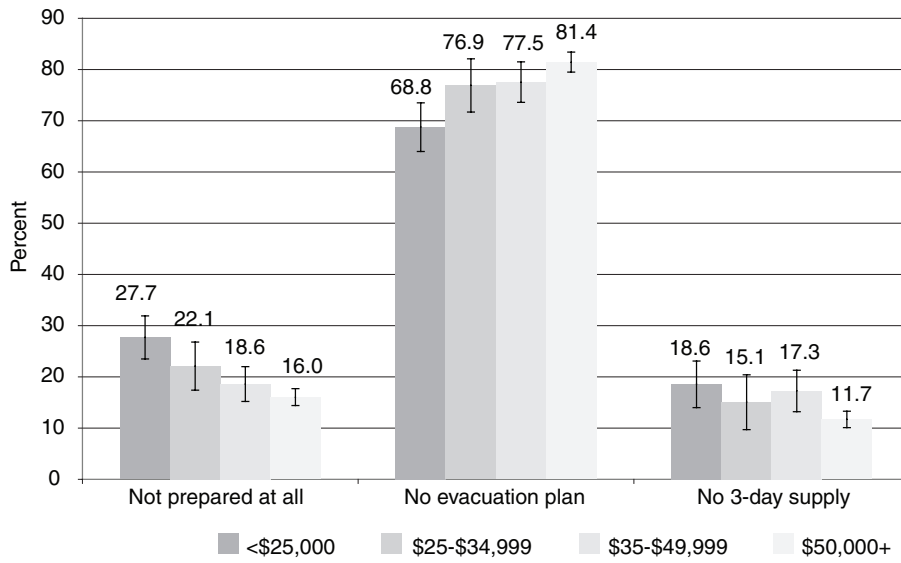
Figure 4 shows that adults living in households with annual incomes of less than \$25,000 have the highest percentage (27.7%) reporting that they are not prepared at all for an emergency or large-scale disaster. Adults living in households with annual incomes of \$50,000 or more had the lowest percentage (16.0%) reporting that they are not prepared at all for an emergency or large-scale disaster.

Adults living in households with annual incomes at or above \$50,000 have the highest percentage (81.4%) without a writ-

ten disaster evacuation plan, and adults living in households with annual incomes of less than \$25,000 have the lowest percentage (68.8%) reporting that they do not have a plan.

Adults living in households with annual incomes of less than \$25,000 have the highest percentage (18.6%) reporting that they do not have a 3-day supply of non-perishable food, and adults living in households with annual incomes at or above \$50,000 have the lowest percentage (11.7%).

Figure 4. Emergency preparedness by household income: Colorado BRFSS, 2007



Disability and Region

There were no statistically significant differences on any of the three emergency preparedness measures (preparedness, evacuation plan, and 3-day food supply) by disability status or by region.

Discussion

In 2007, the Office of Emergency Preparedness and Response at the Colorado Department of Public Health and Environment and local public health agencies promoted emergency preparedness with the “What If? Colorado” campaign. The goals included increasing awareness of the importance of being prepared for a large-scale disaster or emergency.

The vast majority of Colorado adults do not have a written evacuation plan. A targeted and coordinated effort amongst public health officials and community based organizations will be necessary to increase awareness within the demographic strata mentioned above.

For more information on preparing your household for a large-scale disaster or emergency please visit www.readygov/america/index.html and visit www.cdphe.state.co.us/epr/aboutus.html.

