



**MARICOPA COUNTY DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DISEASE CONTROL
OFFICE OF EPIDEMIOLOGY**

**HEAT-ASSOCIATED DEATHS IN
MARICOPA COUNTY, AZ
ADDENDUM TO THE 2013 FINAL REPORT
WITH RESOLUTION TO THREE PENDING
CASES**

4/16/2015

Table of Contents

Background	3
Results of the Pending Cases	3
Table 1: Identifying Characteristics of the Two Pending Cases	3
Preliminary and Final Results	4
Table 2: Heat Associated Deaths by Classification	4
Table 3: Heat Associated Deaths by Place of Residence	4
Table 4: Heat Associated Deaths by Gender	4
Table 5: Heat Associated Deaths by Age Group	5
Table 6: Heat Associated Deaths by Number of Years Spent in Arizona	5
Table 7: Heat Associated Deaths by Race/Ethnicity	6
Table 8: Heat Associated Deaths by Place of Injury	6
Table 9: Heat Associated Deaths by Place of Outdoor Injury	7
Table 10: Heat Associated Deaths by Residency Status	7
Table 11: Heat Associated Deaths by Drug & Alcohol Use (Death Certificate)	8

Background

After extensive investigation into the three pending cases, it was found that two of the three cases were legitimate heat-associated deaths, while one case was ruled out. This addendum is a continuation of the 2013 Final Heat-Associated Death Report and includes a summarization of the two heat-associated deaths that have been confirmed. In this report you will find a table depicting the history and demographics of the two previously pending heat-associated deaths, followed by a series of tables depicting the preliminary 2013 results compared to the final 2013 results.

Final Results of the Two Pending Cases

Table 1

Identifying Characteristics of the Two Pending Cases		
	<u>Case #1</u>	<u>Case #2</u>
Heat Caused or Heat Related	Heat Caused	Heat Caused
Gender	Male	Male
Age	45	1
Age Group	35-49	0-4
# of Years Spent in Arizona	14	1
Race	Unknown	White
Place of Injury	Outdoor	Outdoor
Place of Outdoor Injury	Urban Area	Car
Air Conditioning Status	N/A	N/A
Homeless Status	Homeless	Non-Homeless
Drug/Alcohol Related based on records from the Death Certificate	No	No
Place of Residency	Maricopa County	Maricopa County
Date of Injury	7/26/2013	9/21/2013
Date of Death	7/26/2013	9/23/2013

Comparison of the Preliminary and Final Results for the 2013 Heat Mortality Report

Table 2

Heat Associated Deaths by Classification		
	<u>Preliminary Results</u>	<u>Final Results</u>
Heat Related	33 (44.6%)	33 (43.4%)
Heat Caused	41 (55.4%)	43 (56.6%)
Total	74 (100%)	76 (100%)

Table 3

Heat Associated Deaths by Place of Residence		
	<u>Preliminary Results</u>	<u>Final Results</u>
Maricopa County	60 (87.0%)	62 (87.3%)
Non-Maricopa County	5 (7.2%)	5 (7.0%)
Non-Arizona	4 (5.8%)	4 (5.6%)
Total	69 (100%)	71 (100%)

*Excludes 5 cases where residency could not be established

**Non-Maricopa County residents include 5 cases from unidentified AZ counties

***Non-Arizona residents include three U.S. residents (CA, OR, WV) and one non-US resident (Mexico)

Table 4

Heat Associated Deaths by Gender		
	<u>Preliminary Results</u>	<u>Final Results</u>
Total # Males	60 (81.1%)	62 (81.6%)
Total # Females	14 (18.9%)	14 (18.4%)
Total	74 (100%)	76 (100%)

Table 5

Heat Associated Deaths by Age Group		
	<u>Preliminary Results</u>	<u>Final Results</u>
0-4	1 (1.4%)	2 (2.7%)
5-19	2 (2.7%)	2 (2.7%)
20-34	7 (9.6%)	7 (9.3%)
35-49	19 (26.0%)	20 (26.7%)
50-64	23 (31.5%)	23 (30.7%)
65-74	11 (15.1%)	11 (14.7%)
75+	10 (13.7%)	10 (13.3%)
Total	73 (100%)	75 (100%)

*One case was excluded due to unknown age group

Table 6

Heat Associated Deaths by Number of Years Spent in Arizona		
	<u>Preliminary Results</u>	<u>Final Results</u>
< 3	11 (18.0%)	12 (19.0%)
3-9	9 (14.8%)	9 (14.3%)
10-19	5 (8.2%)	6 (9.5%)
20+	36 (59.0%)	36 (57.1%)
Total	61 (100%)	63 (100%)

*Excludes thirteen cases for which time spent in Arizona was unknown at the time of analysis

Table 7

Heat Associated Deaths by Race/Ethnicity		
	<u>Preliminary Results</u>	<u>Final Results</u>
White	37 (62.7%)	38 (63.3%)
Hispanic	12 (20.3%)	12 (20.0%)
African American	8 (13.6%)	8 (13.3%)
Native American	2 (3.4%)	2 (3.3%)
Total Rates:	59 (100%)	60 (100%)

*Based on 2012 Census population estimates for Maricopa County.

*Preliminary results: Excludes fourteen cases that were not Maricopa County residents (one with unknown race), and one additional case with multiple races indicated.

**Final Results: Excludes one case that was a Maricopa County resident with unknown race, fourteen cases that were not Maricopa County residents (one with unknown race), and one additional case with multiple races indicated.

Table 8

Heat Associated Deaths by Place of Injury		
	<u>Preliminary Results</u>	<u>Final Results</u>
Indoor	30 (40.5%)	30 (39.5%)
Outdoor	44 (59.5%)	46 (60.5%)
Total	74 (100%)	76 (100%)

Table 9

Heat Associated Deaths by Place of Outdoor Injury		
	<u>Preliminary Results</u>	<u>Final Results</u>
Urban Area	17 (38.6%)	18 (39.1%)
Desert Area/Trail	11 (25.0%)	11 (23.9%)
Private Residence	11 (25.0%)	11 (23.9%)
Car	5 (11.4%)	6 (13.0%)
Total	44 (100%)	46 (100%)

Table 10

Heat Associated Deaths by Residency Status		
	<u>Preliminary Results</u>	<u>Final Results</u>
Homeless	12 (16.2%)	13 (17.1%)
Non-Homeless	62 (83.8%)	63 (82.9%)
Total	74 (100%)	76 (100%)

Table 11

Drug and Alcohol Use, as Mentioned on the Death Certificate, for Heat-Associated Deaths by Homelessness				
	<u>Preliminary Results</u> Drug and/or Alcohol Use	<u>Preliminary Results</u> 'No' Drug and/or Alcohol Use	<u>Final Results</u> Drug and/or Alcohol Use	<u>Final Results</u> 'No' Drug and/or Alcohol Use
Homeless	6 (23.1%)	6 (12.5%)	6 (23.1%)	7 (14.0%)
Non-Homeless	20 (76.9%)	42 (87.5%)	20 (76.9%)	43 (86.0%)
Total	26 (100%)	48 (100%)	26 (100%)	50 (100%)