
Deaths Among the Homeless in Fulton County, GA, 1988-90

RANDY HANZLICK, MD
R. GIBSON PARRISH, MD

Dr. Hanzlick is an Assistant Professor of Forensic Pathology, Emory University School of Medicine, and a Forensic Pathologist with the Centers for Disease Control and Prevention, Atlanta. Dr. Parrish is Chief, Surveillance and Information Systems Section, Medical Examiner/Coroner Information Sharing Program, Surveillance and Programs Branch, Division of Environmental Hazards and Health Effects, National Center for Environmental Health, Centers for Disease Control and Prevention, Atlanta.

Cooperating in the study were Saleh Zaki, MD, Fulton County Medical Examiner, and Anita Beaty, Executive Director, Atlanta Task Force for the Homeless.

Tearsheet requests to Randy Hanzlick, MD, 916 Cumberland Rd., NE, Atlanta, GA 30306; tel. 404-616-6621.

Synopsis

The circumstances surrounding the deaths of 128 homeless persons investigated by the Fulton County, GA, Medical Examiner's Office during the period 1988-90 and the demographic characteristics of the deceased were studied and analyzed. Empha-

sis was placed on cause and manner of death, unintentional injuries, and alcohol-related mortality.

Ninety-eight percent of those who died were men, 55 percent occurred outdoors, 55 percent were due to natural causes, and 42 percent resulted from injuries, most of which were unintentional. The average age at death was 46 years, and 80 percent of those who died were found dead. Nearly half of the deaths (47 percent) were related to the acute or chronic effects of alcohol; the blood of 45 percent tested positive for ethanol; of that 45 percent, 75 percent had a blood ethanol concentration that exceeded 0.1 grams per deciliter.

Mortality patterns among the homeless persons in the study were similar to those previously reported in Fulton County and in San Francisco, CA. Available data indicate that mortality prevention strategies for the homeless in Fulton County should target alcohol abuse and unintentional injuries. Further studies are needed to document regional mortality patterns of the homeless.

IN FULTON COUNTY, GA, (1990 population 648,951), an estimated 10,000 to 15,000 persons are homeless, according to Anita Beaty, Executive Director of the Atlanta Task Force for the Homeless, in January 1992. Only two reports of mortality patterns among the homeless are available (1,2). To characterize deaths among the homeless further, we reviewed the investigative records of the Fulton County Medical Examiner (FCME) for homeless persons who died during the 3-year period from 1988 through 1990.

Methods

Decedents were classified as homeless at the time of death if (a) they were residing at a shelter for the homeless; (b) they had no current, valid, residential address; or (c) they were residing at a place not usually considered to be habitable. The

manner of death was determined by the FCME to be due to either natural or external causes. Deaths from natural causes are those due solely to disease or the aging process. Deaths from external causes are those that are usually injury- or drug-caused. They are categorized as unintentional (accidental), or intentional (homicide or suicide). Deaths of unknown manner were classified as undetermined. Cause and manner of death determinations were based on reported circumstances, known medical history, scene investigation, and autopsy when indicated.

Results

General demographics. Among the 128 persons identified as homeless who died, 125 were men, 77 were black, 49 white, 2 unknown. The average age at death was 46 years (standard deviation, 12 years;

Table 1. Location and circumstances of death for 128 homeless persons in Fulton County, GA, 1988-90

Circumstances	Natural	Homicide	Suicide	Unintentional			Total	
				Nonvehicular	Vehicular	Undetermined	Number	Percent
Total persons	71	10	4	35	5	3	128	
<i>Location of death</i>								
Street, parking lot, or public area	16	3	...	10	5	...	34	27
Vacant building	15	5	1	7	...	1	29	23
Place of business	12	...	2	8	...	...	22	17
Residential area	12	...	...	3	...	2	17	13
Rooming house, hotel, or motel area	7	...	...	2	...	...	9	7
Wooded area	4	1	1	1	...	...	7	5
Shelter for homeless	3	...	...	...	...	...	3	2
Jail	2	...	...	...	...	...	2	2
Other, unspecified	...	1	...	4	...	...	5	4
<i>Place of death</i>								
At scene	60	9	4	25	3	2	103	80
On arrival at hospital	1	...	...	...	...	...	1	1
In emergency department	9	1	...	4	...	1	15	12
In hospital	1	...	...	6	2	...	9	7
<i>Environment</i>								
Lethal incident:								
Indoors	33	5	2	8	...	2	50	39
Outdoors	32	5	2	26	5	1	71	55
In nonmoving vehicle	6	...	...	1	...	...	7	5
<i>Discovery</i>								
Body found	59	8	4	27	...	3	101	79
Incident witnessed	12	2	...	8	5	...	27	21

range 21 to 84 years). The average age at death for all persons in the county whose deaths were certified by the FCME was 53 years (standard deviation, 23 years; range younger than 1 to 107 years).

Case investigation. Medical history was available for 61 decedents (48 percent). Scene investigation was conducted in 99 cases (77 percent), the deceased body was examined externally without autopsy in 54 cases (42 percent), and a complete autopsy was conducted in 69 cases (54 percent). Blood alcohol was measured in 112 decedents (88 percent) and tests for other drugs were conducted in 103 cases (80 percent).

Location of death. Deaths occurred most often outdoors (55 percent) (table 1). Persons dead on the scene numbered 103 (80 percent); 15 (12 percent) died in emergency departments, and 9 (7 percent) died after admission to hospitals. Deaths occurring on the street, in parking lots, or in public areas numbered 34 (27 percent); 29 (23 percent) occurred in vacant buildings. Seven (5 percent) occurred in nonmoving vehicles. Only three deaths (2 percent) occurred at shelters for the homeless.

Manner and circumstances of death. The proportion of unintentional fatal injuries (31 percent) was much larger among the homeless than it was among all medical examiner cases, particularly in

reference to nonvehicular unintentional deaths (table 2). Seventy-one deaths (55 percent) among homeless persons were due to natural causes, 10 (8 percent) were homicides, 4 (3 percent) were suicides, and 3 (2 percent) were of undetermined manner. Nearly half of the unintentional deaths from injuries were due to fires or ethanol poisoning (table 3).

Crude death rate. Using an estimated homeless population of 10,000 to 15,000 persons, the average annual crude death rate was 281 to 426 per 100,000 for those persons whose deaths came to the attention of the medical examiner.

Presence of alcohol. The blood of 112 (88 percent) homeless decedents was tested for ethanol, and results for 57 samples (51 percent of those tested, 45 percent of homeless persons) were positive (table 3). Forty-three decedents (34 percent of total, 75 percent of those with ethanol in their blood) had ethanol levels exceeding 0.10 grams per deciliter. Blood ethanol was detected most often in persons who died of unintentional injuries or homicide.

Presence of drugs. Cocaine was detected in 13 of 103 decedents who were tested for the drug; opiates were not detected in any of 101 decedents tested for opiates. Amphetamines were present in only 1 of 87 decedents who were tested, and cannabinoids

Table 2. Manner of death for all Fulton County residents, Fulton County Medical Examiner (FCME) death investigations, and deaths of homeless persons in Fulton County, GA, 1988-90

Causes	All deaths		FCME cases		Homeless	
	Number	Percent	Number	Percent	Number	Percent
Natural causes...	16,555	90	3,091	60	71	55
External causes—						
intentional:						
Homicide.....	631	3	770	15	10	8
Suicide.....	250	1	259	5	4	3
Totals.....	881	5	1,029	20	14	11
unintentional:						
Nonvehicular...	506	3	535	10	35	27
Vehicular.....	421	2	425	8	5	4
Totals.....	927	5	960	19	40	31
Undetermined....	32	(²)	32	1	3	2
Grand total.....	18,395		5,112		128	

¹ Does not add because of rounding.

² Less than 1 percent.

(marijuana) were present in only 2 of 96 decedents tested. Phenobarbital (4 cases positive) and phenytoin (6 cases positive) were present in 7 of 99 decedents tested for those substances. No routine tests were done for antipsychotic medications.

Alcohol relatedness. Regardless of whether ethanol was or was not detected in postmortem blood samples, ethanol was cited as a cause of (or contributor to) 42 of 71 natural deaths (59 percent) and 18 of 54 deaths (33 percent) from injury (of which 7 were due to acute ethanol poisoning) on the basis of cause of death as listed on the death certificate. Therefore, 60 of the 128 deaths (47 percent) were related to the acute or chronic effects of alcohol. Fourteen additional decedents (11 percent) who died of injuries and 5 additional decedents (4 percent) who died of natural causes had alcohol in their blood, but the death certificate did not mention alcohol as causing or contributing to death. Therefore, 79 deaths (62 percent) might have been alcohol related.

Natural deaths. Natural deaths accounted for 55 percent of deaths among homeless persons. Aside from 42 natural deaths that were alcohol-related, 29 deaths were attributed to other natural causes that included 13 from hypertension or cardiac disease, 2 each from seizure disorders, Acquired Immunodeficiency Syndrome, pneumonia, and lung disease, and a total of 7 from other conditions such

as diabetes, cerebral hemorrhage, and chronic drug abuse.

Psychiatric history. Psychiatric histories were not routinely evaluated, and the role of chronic mental illness cannot be addressed in this study.

Discussion

The patterns of death among the homeless in this Fulton County study are similar to those reported for the county during 1986. In many respects, the mortality patterns are also similar to those observed among the homeless in San Francisco from 1985 through 1990 (1,2). In general, men in their fifth decade predominated, the racial makeup of homeless decedents paralleled that of the general population of each city (black majority in Atlanta, white majority in San Francisco), a third or more of deaths among the homeless were due to unintentional injuries, and almost half of the decedents had ethanol in their blood at the time of death. In the two cities, similar proportions of homeless decedents were found in vacant buildings (21-25 percent) and abandoned vehicles (approximately 5 percent). The proportion of decedents testing positive for cocaine (13 percent) was low and similar to that in San Francisco (14 percent).

A few differences were also observed when comparing our results with the earlier study in Atlanta and the recent report from San Francisco (1,2). The proportion of deaths due to unintentional injuries in our study (31 percent) was somewhat lower than that in the smaller, previous Atlanta-based study (48 percent) (1). Despite routine tests, opiates were not detected among homeless persons who died in Fulton County, whereas 21 percent of homeless decedents in San Francisco tested positive for opiates. A higher proportion of deaths were attributed to the acute and chronic effects of ethanol in Fulton County (47 percent) compared with San Francisco's approximately 15 percent attributed to "alcoholism," but the San Francisco study did not specify the number of overdose deaths that were due to ethanol. The finding of a high proportion of ethanol-related deaths among homeless persons in Fulton County is consistent with a previous Atlanta-based study of the deaths of 18 homeless persons, more than half of whom previously had been patients at an alcohol treatment center or public hospital for alcohol-related disorders (3).

Although the Fulton County population is similar in size to San Francisco's and the homeless

populations in the two areas are estimated to be of similar size, the number of deaths of homeless persons in San Francisco per year is reported to be 2.5 times that of Fulton County. Beyond that, there was a greater percentage of women observed among San Francisco's homeless. Insufficient data exist to determine if the reported difference is accurate or because of differences in definitions of homelessness or other factors such as differing detection rates for deaths of homeless persons or inaccurate estimates of the size of the homeless population. Such variation points out the need for accurate estimates of the number of living homeless persons and locally based studies of mortality among the homeless. The crude death rate for homeless persons was slightly lower than the death rate for the general population of a similar age, suggesting that estimates of the homeless population in Fulton County were too high or that a number of deaths of homeless persons were not reported to the FCME.

Since 80 percent of persons in this study were found dead, it seems that prevention strategies aimed at improving the access to emergency medical services would be unlikely to have significant impact on the mortality of this homeless population. Prevention of the 10 deaths from fires and the 7 from acute alcohol poisoning, however, could have reduced the 40 unintentional deaths from these causes by almost half, and prevention of alcohol-related deaths in general could nearly halve the number of deaths among the homeless.

In Georgia, the medical examiner or coroner is required to investigate medically unattended deaths, unexplained deaths, and all deaths from external causes. That should make the sensitivity of medical examiner and coroner data useful in detecting deaths of homeless persons. Further studies are needed, however, to quantify and characterize mortality among the proportion of homeless people whose deaths are not reported to the medical examiner or coroner for investigation. Until such studies are available to complement findings from medical examiner and coroner data, public health agencies and other organizations providing health services to the homeless may find the medical examiner data useful as an adjunct to the usual vital statistics used for assessing mortality and planning social services for the homeless.

Although further local studies of mortality among the homeless are needed to determine geographic idiosyncrasies in mortality patterns, preliminary information indicates that mortality prevention strategies should target alcohol abuse and

Table 3. Blood ethanol (BE) testing and detection among homeless decedents in Fulton County, GA, 1988-90

Category	Total	Tested	Detected	BE > 0.1 gm per dL
Natural causes.....	71	64	26	16
External causes— intentional:				
Homicide.....	10	8	6	4
Suicide.....	4	4	1	1
Totals.....	14	12	7	5
External causes— unintentional:				
Fires.....	10	7	3	3
Ethanol poisoning	7	7	7	7
Exposure.....	5	5	4	3
Pedestrian.....	5	4	3	3
Hit by train.....	4	4	2	2
Fall.....	6	4	3	3
Cocaine.....	1	1	0	0
Other.....	2	2	1	0
Totals.....	40	34	23	21
Undetermined.....	3	2	1	1
Grand total ..	128	112	57	43

BE > 0.1 gm per dL = blood ethanol more than 0.1 grams per deciliter.

unintentional injuries. There were few deaths in Atlanta or San Francisco shelters, indicating that shelter use by homeless persons may be associated with a reduced risk of death. To date, studies of mortality among the homeless have been relatively few, and further studies are needed to determine if available data from Atlanta and San Francisco are applicable to other regions.

References.....

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