

**American Homicide Supplemental Volume (AHSV)**

**Homicide Estimates (HE)**

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The following tables estimate the number of adult homicide victims in various jurisdictions in the past. The text is taken directly from the chapter on Methods in *American Homicide*. Readers who have read the portion of that chapter on Homicide Estimates can proceed directly to the tables.

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## Homicide Estimates

Note: The text here is from the chapter on Methods in *American Homicide*. The tables of estimates of the number of adult homicide victims appear after the text.

The surviving evidence on homicides in New England, New Netherlands, Ohio, Georgia, Florida, and Rockbridge County, Virginia, is sufficient to estimate the number of probable murders that came to the attention of authorities or the public. Two lists of homicides were created, one drawn from legal records (inquists, case files, docket books, minute books, and prison records) and the other from non-legal sources (newspapers, diaries, oral tradition recorded in early town histories, etc.). The lists were matched to determine the number of homicides that appeared on both lists ( $C$ ), on the list from legal records only ( $N_L$ ), and on the list from non-legal records only ( $N_{N-L}$ ). Following the method of Chandra Sekar and Deming (1949), as adapted by Eckberg (2001), the proportion of homicides missed by both lists ( $X$ ) can be estimated.

$$X = (N_L * N_{N-L}) / C$$

The result can be used to estimate the number of publicly recognized homicides ( $N$ ) that occurred: the sum of the number found only in legal records ( $N_L$ ), the number found only in non-legal records ( $N_{N-L}$ ), the number found in both kinds of records ( $C$ ), and the

number missed by both lists (X).

$$N = N_L + N_{N-L} + C + X$$

The standard error of the estimate (which measures, in practical terms, the reliability of the estimate) is equal to the square root of

$$(N * q_L * q_{N-L}) / (p_L * p_{N-L})$$

where “q” and “p” are the proportions used to calculate the standard error:

$$p_L = C / (C + N_{N-L})$$

$$p_{N-L} = C / (C + N_L)$$

$$p_L + q_L = p_{N-L} + q_{N-L} = 1$$

The matching-list method has been used successfully to estimate death rates for young children in Egypt (Becker et al. 1996), HIV-infection rates among drug addicts in Thailand (Mastro et al. 1994), and other vital or epidemiological rates in societies that lack effective means of registration or reporting (e.g., Crimmins 1980; Hook and Regal 1995).

The method is robust. It does not require that the evidence from which the lists are drawn be comprehensive or complete, so long as the loss of records and the omissions of

record keepers are random. The method requires, however, that the matched lists be statistically independent, an assumption that does not hold for homicides as a whole. The requirement for independence can be largely met by disaggregating the homicides on the lists into homogeneous groups based on geography, period, etc., and by estimating the number of homicides separately for each group. What interdependence between the lists remains after disaggregation will probably bias the estimates downward in the range of 10-15 percent, but that bias should be consistent over time and is far too small to account for the historic trends that appear in the homicide rates.

Estimates of the proportions of publicly-recognized homicides that appear in the surviving records for each jurisdiction are in the tables below. The estimates vary, depending on the degree of record loss, the effectiveness of the criminal justice system, the availability of local news in periodicals, diaries, or town histories, and the race of the victim. For instance, the surviving records from New Hampshire and Vermont contain evidence on an estimated 98 percent of homicides, 1794-1900, but on only 72 percent of homicides during the revolutionary period, 1775-1793, when courts were disrupted and newspapers lost touch with local correspondents. The estimates for European Americans in colonial and revolutionary New England range from a low of 55 percent, 1650-1669 (the years for which the minutes of the Massachusetts Court of Assistants are missing) to a high of 95 percent, 1784-1797. The estimates for Native American and African Americans, 1670-1797, are generally lower, because their murders were less likely to be recorded.

**AHSV: HE Table 1**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in New Hampshire and Vermont, 1775-1900**

	1775-1793	1794-1880	1881-1900
Percentage of estimated homicides found	.72	.98	.99
Located only in legal records	4	16	5
Located only in other sources	14	144	78
Located in legal records and in other sources	6	239	133
Number of homicides found	24	399	216
Estimated number of homicides	33.3	408.6	218.9
Standard error of estimated homicides	7.2	4.1	2.2

**AHSV: HE Table 2**

**Estimates from Matched Lists of  
the Number of European American Adult Homicide Victims  
in Connecticut, Massachusetts, Maine, and New Hampshire, and Vermont  
1630-1797**

	1630- 1649	1650- 1669	1670- 1692	1693- 1749	1750- 1774	1775- 1783	1784- 1797
Percentage of estimated homicides found	.66	.55	.70	.83	.94	.79	.95
Located only in legal records	4	11	15	39	16	15	15
Located only in other sources	31	4	7	8	11	22	6
Located in legal records and in other sources	6	3	8	22	43	21	31
Number of homicides found	41	18	30	69	70	58	52
Estimated number of homicides	61.7	32.7	43.1	83.2	74.1	73.7	54.9
Standard error of estimated homicides	14.6	12.6	8.4	7.3	2.7	7.4	2.3

**AHSV: HE Table 3**

**Estimates from Matched Lists  
of the Number of Native American and African American Adult Homicide Victims  
in Connecticut, Massachusetts, Maine, and New Hampshire, and Vermont,  
1630-1797**

	Native American				African American
	1670- 1729	1730- 1749	1750- 1774	1775- 1797	1670-1797
Percentage of estimated homicides found	.87	.79	.91	.72	.72
Located only in legal records	35	10	12	2	14
Located only in other sources	5	7	6	7	4
Located in legal records and in other sources	20	10	20	3	6
Number of homicides found	60	27	38	12	24
Estimated number of homicides	68.8	34.0	41.6	16.7	33.3
Standard error of estimated homicides	5.5	4.9	2.7	5.1	5.9



**AHSV: HE Table 4**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in New Netherlands, 1638-1656<sup>1</sup>**

Estimated number of homicides	33.1
Percentage of estimated homicides found	.91
Number of homicides found	30
Located only in government records	22
Located only in other sources	1
Located in government records and in other sources	7
Standard error of estimated homicides	1.7

<sup>1</sup> The table includes European and African American victims.

**AHSV: HE Table 5**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Ross and Holmes Counties, Ohio, 1798-1900**

	1798- 1815	1816- 1846	1847- 1880	1881- 1900
Located only in legal records	3	11	12	2
Located only in other sources	8	0	8	2
Located in legal records and in other sources	2	5	36	21
Number of homicides found	13	16	56	25
Estimated number of homicides	25.0	16.0	58.7	25.2
Percentage of estimated homicides found	.52	1.00	.95	.99
Standard error of estimated homicides	12.2	0.0	2.1	0.5

**AHSV: HE Table 6**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Cuyahoga County, Ohio, 1822-1876**

	1822- 1846	1847- 1865	1866- 1876
Located only in legal records	2	17	7
Located only in other sources	2	12	15
Located in legal records and in other sources	2	38	45
Number of homicides found	6	67	67
Estimated number of homicides	8.0	72.4	69.3
Percentage of estimated homicides found	.75	.93	.97
Standard error of estimated homicides	2.8	3.2	1.9

**AHSV: HE Table 7**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Rockbridge County, Virginia, 1790-1900**

	Whites		Blacks	
	1790-1863	1864-1900	1790-1863	1864-1900
Located only in legal records	3	2	6	0
Located only in other sources	2	7	2	10
Located in legal records and in other sources	11	19	4	10
Number of homicides found	16	28	12	20
Estimated number of homicides	16.5	28.7	15.0	20.0
Percentage of estimated homicides found	.97	.97	.80	1.00
Standard error of estimated homicides	0.9	1.1	3.4	0.0

**AHSV: HE Table 8**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Franklin, Jasper, and Wilkes Counties, Georgia, 1790-1900**

	1790- 1815	1816- 1863	1864- 1873	1874- 1887	1888- 1900
Estimated number of homicides	112.7	90.0	50.8	58.1	120.6
Percentage of estimated homicides found	.32	.81	.79	.77	.82
Number of homicides found	36	73	40	45	99
Located only in legal records	23	68	20	23	41
Located only in other sources	10	1	7	8	20
Located in legal records and in other sources	3	4	13	14	38
Standard error of estimated homicides	42.9	18.9	4.6	5.3	5.3

**AHSV: HE Table 9**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Florida, 1821-1845**

Homicides committed by:

	Blacks	Indians	Whites	All Assailants
Percentage of estimated homicides found	.80	.75	.74	.75
Located only in legal records	6	1	53	60
Located only in other sources	7	1	29	37
Located in legal records and in other sources	8	1	37	46
Number of homicides found	21	3	119	143
Estimated number of homicides	26.3	4.0	160.5	191.3
Standard error of estimated homicides	2.2	1.0	6.5	7.0

**AHSV: HE Table 10**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Florida, 1846-1861**

Homicides committed by:

	Blacks	Indians	Whites	All Assailants
Percentage of estimated homicides found	.74	1.00	.60	.63
Located only in legal records	16	0	117	133
Located only in other sources	5	3	55	63
Located in legal records and in other sources	8	4	44	56
Number of homicides found	29	7	216	252
Estimated number of homicides	39.0	7.0	362.3	401.6
Standard error of estimated homicides	3.2	0.0	14.3	14.0

**AHSV: HE Table 11**

**Estimates from Matched Lists of the Number of Adult Homicide Victims  
in Florida, 1821-1861**

Homicides committed by whites:

	Percentage of estimated homicides found	Estimated number of homicides
1821-1827	.84	8.3
1828-1834	.91	32.9
1835-1842	.64	96.8
1843-1845	.59	33.8
1846-1854	.73	115.0
1855-1857	.70	66.0
1858-1861	.53	162.0



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