

Prenatal and Infant Health

Each year families across the United States bring home a healthy baby who has all the potential for a full and productive life. But some families will suffer the loss of their child soon after birth.

Infant morbidity and mortality are critical indicators of the health of a population. Low birth weight and preterm birth result in a significant loss of life; surviving infants often sustain residual injuries that affect quality of life, and there is substantial financial cost to individuals and to society in caring for these children.

Certain factors have proven to increase the likelihood of delivering a low birth weight or preterm infant, such as (1) cigarette smoking during pregnancy; (2) substance abuse immediately prior to conception and during pregnancy (including alcohol abuse); and (3) teenage pregnancies.

Birth defects rank as the leading cause of mortality in full-term newborn babies in the United States. Iowa's overall birth defect rate is approximately 5% of all births. The state of Iowa has taken a leadership role in birth defect surveillance and serves as a model to other states. Iowa has also partnered with the March of Dimes' Folic Acid education campaign and the Preterm Birth Prevention campaign.

Adequate folic acid intake by women of reproductive years has been demonstrated to decrease the risk of neural tube defects in children. Early prenatal care for mothers and health education to women and medical providers allow for a healthier pregnancy and improved birth outcomes.

Interventions need to focus on providing preconceptional health care to women, early and comprehensive prenatal care, and family support that includes promotion of healthy lifestyles.

IN AN AVERAGE WEEK IN IOWA*

- ✓ 736 babies are born.
- ✓ 73 babies are born to teen mothers.
- ✓ 51 babies are born to mothers who receive inadequate prenatal care.
- ✓ 45 babies are born with low birth weight.
- ✓ 78 babies are born preterm.
- ✓ 5 babies die before their first birthday.

*Source: March of Dimes perinatal statistics: www.marchofdimes.com/peristats

Live Births 1998-2001

	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	280	8.5 (98)	Lucas	439	11.6 (45)
	Adams	170	9.5 (94)	Monroe	362	11.3 (56)
	Audubon	248	9.1 (97)	Osceola	296	10.5 (76)
	Clarke	438	12.2 (28)	Pocahontas	291	8.4 (99)
	Davis	458	13.4 (12)	Ringgold	248	11.4 (51)
	Decatur	365	10.6 (75)	Taylor	301	10.8 (71)
	Fremont	359	11.3 (57)	Van Buren	381	12.2 (26)
	Howard	449	11.3 (55)	Wayne	296	11.0 (63)
	Ida	319	10.2 (86)	Worth	337	10.7 (72)
				Total	6,037	10.8
Counties with Average Population 10,000 to 20,000	Allamakee	686	11.7 (40)	Humboldt	453	10.9 (67)
	Appanoose	593	10.8 (69)	Iowa	715	11.4 (49)
	Butler	626	10.2 (84)	Jefferson	629	9.7 (92)
	Calhoun	419	9.4 (95)	Keokuk	547	12.0 (33)
	Cass	614	10.5 (77)	Kossuth	658	9.6 (93)
	Cedar	760	10.5 (78)	Louisa	660	13.6 (11)
	Cherokee	528	10.1 (87)	Lyon	603	12.8 (18)
	Chickasaw	573	10.9 (68)	Madison	720	12.9 (17)
	Clay	782	11.2 (58)	Mills	686	11.9 (38)
	Clayton	811	10.8 (70)	Mitchell	539	12.4 (23)
	Crawford	812	12.0 (35)	Monona	425	10.6 (73)
	Delaware	874	11.9 (37)	Montgomery	574	12.2 (27)
	Dickinson	662	10.1 (88)	O'Brien	676	11.1 (61)
	Emmet	501	11.3 (53)	Page	714	10.5 (79)
	Floyd	776	11.5 (47)	Palo Alto	424	10.5 (80)
	Franklin	472	11.0 (65)	Poweshiek	784	10.4 (81)
	Greene	439	10.6 (74)	Sac	475	10.2 (85)
	Grundy	498	10.1 (89)	Shelby	546	10.4 (82)
	Guthrie	531	11.7 (43)	Tama	949	13.1 (15)
	Hamilton	795	12.1 (29)	Union	557	11.3 (54)
Hancock	526	10.9 (66)	Winnebago	513	11.0 (64)	
Hardin	881	11.7 (41)	Wright	638	11.1 (62)	
Harrison	698	11.2 (60)	Total	28,342	11.2	
Counties with Average Population > 20,000	Benton	1,220	12.1 (32)	Jones	804	9.9 (91)
	Boone	1,221	11.7 (44)	Lee	1,736	11.4 (50)
	Bremer	934	10.0 (90)	Mahaska	1,165	13.0 (16)
	Buchanan	1,209	14.3 (07)	Marion	1,600	12.5 (21)
	Buena Vista	963	11.8 (39)	Marshall	2,181	13.9 (08)
	Carroll	986	11.5 (48)	Muscatine	2,524	15.2 (03)
	Cerro Gordo	2,081	11.2 (59)	Plymouth	1,185	12.0 (36)
	Clinton	2,510	12.5 (20)	Sioux	1,729	13.6 (10)
	Des Moines	2,091	12.3 (25)	Story	3,609	11.4 (52)
	Fayette	905	10.3 (83)	Wapello	1,663	11.5 (46)
	Henry	976	12.0 (34)	Washington	1,210	14.6 (04)
	Jackson	951	11.7 (42)	Webster	2,004	12.5 (19)
	Jasper	1,795	12.1 (31)	Winneshiek	789	9.3 (96)
				Total	40,041	12.1
MSA Counties	Black Hawk	6,379	12.5 (22)	Polk	24,178	16.2 (01)
	Dallas	2,123	13.2 (14)	Pottawattamie	4,782	13.7 (09)
	Dubuque	4,705	13.2 (13)	Scott	9,165	14.5 (05)
	Johnson	5,361	12.1 (30)	Warren	2,011	12.4 (24)
	Linn	10,941	14.3 (06)	Woodbury	6,606	15.9 (02)
			Total	76,251	14.4	
State Total	150,671	12.9				

¹Rates per 1,000 population

²Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

Out-of-Wedlock Births 1998-2001

	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	58	207.1 (76)	Lucas	100	227.8 (59)
	Adams	35	205.9 (77)	Monroe	97	268.0 (35)
	Audubon	51	205.6 (78)	Osceola	63	212.8 (71)
	Clarke	143	326.5 (13)	Pocahontas	65	223.4 (64)
	Davis	48	104.8 (99)	Ringgold	49	197.6 (81)
	Decatur	105	287.7 (26)	Taylor	67	222.6 (66)
	Fremont	107	298.1 (23)	Van Buren	81	212.6 (72)
	Howard	107	238.3 (55)	Wayne	67	226.4 (62)
	Ida	57	178.7 (91)	Worth	72	213.6 (69)
				Total	1,372	227.3
Counties with Average Population 10,000 to 20,000	Allamakee	156	227.4 (60)	Humboldt	115	253.9 (47)
	Appanoose	192	323.8 (15)	Iowa	140	195.8 (83)
	Butler	132	210.9 (73)	Jefferson	165	262.3 (40)
	Calhoun	102	243.4 (52)	Keokuk	115	210.2 (74)
	Cass	164	267.1 (38)	Kossuth	112	170.2 (94)
	Cedar	141	185.5 (88)	Louisa	188	284.8 (29)
	Cherokee	161	304.9 (22)	Lyon	67	111.1 (98)
	Chickasaw	130	226.9 (61)	Madison	146	202.8 (79)
	Clay	209	267.3 (37)	Mills	196	285.7 (28)
	Clayton	181	223.2 (65)	Mitchell	103	191.1 (84)
	Crawford	253	311.6 (19)	Monona	130	305.9 (21)
	Delaware	167	191.1 (85)	Montgomery	182	317.1 (17)
	Dickinson	160	241.7 (53)	O'Brien	126	186.4 (87)
	Emmet	155	309.4 (20)	Page	225	315.1 (18)
	Floyd	197	253.9 (46)	Palo Alto	111	261.8 (41)
	Franklin	138	292.4 (25)	Poweshiek	208	265.3 (39)
	Greene	114	259.7 (43)	Sac	120	252.6 (49)
	Grundy	81	162.7 (95)	Shelby	101	185.0 (89)
	Guthrie	111	209.0 (75)	Tama	314	330.9 (11)
	Hamilton	223	280.5 (32)	Union	164	294.4 (24)
Hancock	133	252.9 (48)	Winnebago	143	278.8 (33)	
Hardin	222	252.0 (50)	Wright	164	257.1 (44)	
Harrison	166	237.8 (56)	Total	7,023	247.8	
Counties with Average Population > 20,000	Benton	243	199.2 (80)	Jones	215	267.4 (36)
	Boone	284	232.6 (57)	Lee	663	381.9 (03)
	Bremer	178	190.6 (86)	Mahaska	297	254.9 (45)
	Buchanan	262	216.7 (68)	Marion	314	196.3 (82)
	Buena Vista	313	325.0 (14)	Marshall	721	330.6 (12)
	Carrroll	210	213.0 (70)	Muscatine	869	344.3 (10)
	Cerro Gordo	667	320.5 (16)	Plymouth	285	240.5 (54)
	Clinton	898	357.8 (08)	Sioux	205	118.6 (97)
	Des Moines	803	384.0 (02)	Story	537	148.8 (96)
	Fayette	254	280.7 (31)	Wapello	589	354.2 (09)
	Henry	263	269.5 (34)	Washington	210	173.6 (92)
	Jackson	273	287.1 (27)	Webster	797	397.7 (01)
	Jasper	415	231.2 (58)	Winneshiek	143	181.2 (90)
			Total	10,908	272.4	
MSA Counties	Black Hawk	2,367	371.1 (06)	Polk	6,847	283.2 (30)
	Dallas	478	225.2 (63)	Pottawattamie	1,775	371.2 (05)
	Dubuque	1,156	245.7 (51)	Scott	3,392	370.1 (07)
	Johnson	917	171.1 (93)	Warren	447	222.3 (67)
	Linn	2,855	260.9 (42)	Woodbury	2,468	373.6 (04)
			Total	22,702	297.7	
State Total		42,005	278.8			

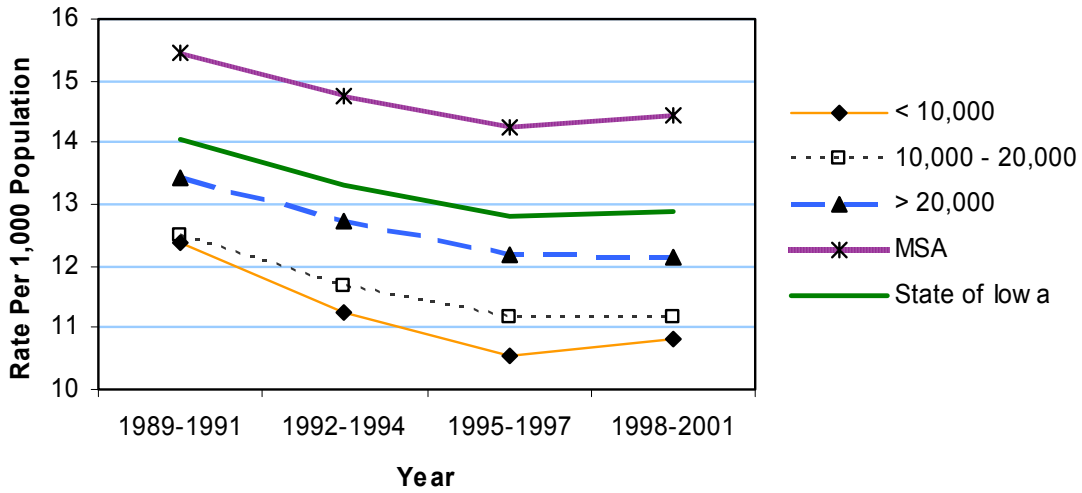
¹Rates per 1,000 live births

²Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

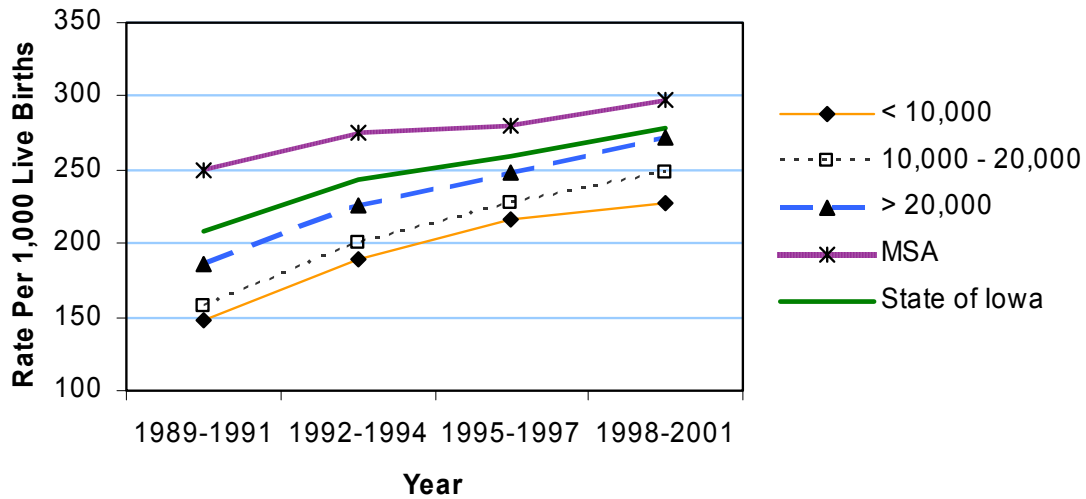
LIVE BIRTHS 1989-2001

Crude Rates



OUT-OF-WEDLOCK BIRTHS 1989-2001

Crude Rates



Mothers Under Age 20 1998-2001

	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	36	128.6 (21)	Lucas	51	116.2 (35)
	Adams	11	64.7 (93)	Monroe	45	124.3 (26)
	Audubon	23	92.7 (56)	Osceola	26	87.8 (64)
	Clarke	62	141.6 (05)	Pocahontas	22	75.6 (80)
	Davis	32	69.9 (88)	Ringgold	29	116.9 (33)
	Decatur	54	147.9 (03)	Taylor	38	126.2 (24)
	Fremont	37	103.1 (42)	Van Buren	50	131.2 (16)
	Howard	37	82.4 (70)	Wayne	44	148.6 (02)
	Ida	27	84.6 (67)	Worth	35	103.9 (40)
				Total	659	109.2
Counties with Average Population 10,000 to 20,000	Allamakee	70	102.0 (43)	Humboldt	39	86.1 (66)
	Appanoose	81	136.6 (09)	Iowa	53	74.1 (83)
	Butler	46	73.5 (84)	Jefferson	61	97.0 (52)
	Calhoun	41	97.9 (50)	Keokuk	49	89.6 (61)
	Cass	76	123.8 (27)	Kossuth	49	74.5 (82)
	Cedar	49	64.5 (94)	Louisa	78	118.2 (32)
	Cherokee	47	89.0 (63)	Lyon	42	69.7 (89)
	Chickasaw	47	82.0 (72)	Madison	47	65.3 (92)
	Clay	88	112.5 (36)	Mills	66	96.2 (53)
	Clayton	62	76.4 (79)	Mitchell	45	83.5 (68)
	Crawford	81	99.8 (47)	Monona	52	122.4 (30)
	Delaware	71	81.2 (73)	Montgomery	60	104.5 (38)
	Dickinson	59	89.1 (62)	O'Brien	70	103.6 (41)
	Emmet	67	133.7 (12)	Page	94	131.7 (15)
	Floyd	70	90.2 (59)	Palo Alto	42	99.1 (48)
	Franklin	64	135.6 (11)	Poweshiek	96	122.4 (29)
	Greene	54	123.0 (28)	Sac	39	82.1 (71)
	Grundy	32	64.3 (96)	Shelby	37	67.8 (90)
	Guthrie	39	73.4 (85)	Tama	120	126.4 (23)
	Hamilton	95	119.5 (31)	Union	51	91.6 (58)
Hancock	53	100.8 (46)	Winnebago	49	95.5 (55)	
Hardin	115	130.5 (17)	Wright	65	101.9 (45)	
Harrison	68	97.4 (51)	Total	2,779	98.1	
Counties with Average Population > 20,000	Benton	89	73.0 (86)	Jones	82	102.0 (44)
	Boone	99	81.1 (74)	Lee	229	131.9 (14)
	Bremer	73	78.2 (78)	Mahaska	150	128.8 (20)
	Buchanan	91	75.3 (81)	Marion	133	83.1 (69)
	Buena Vista	131	136.0 (10)	Marshall	307	140.8 (06)
	Carroll	57	57.8 (97)	Muscatine	413	163.6 (01)
	Cerro Gordo	220	105.7 (37)	Plymouth	104	87.8 (65)
	Clinton	332	132.3 (13)	Sioux	123	71.1 (87)
	Des Moines	305	145.9 (04)	Story	190	52.6 (98)
	Fayette	94	103.9 (39)	Wapello	234	140.7 (07)
	Henry	114	116.8 (34)	Washington	78	64.5 (95)
	Jackson	88	92.5 (57)	Webster	261	130.2 (18)
	Jasper	172	95.8 (54)	Winneshiek	53	67.2 (91)
			Total	4,222	105.4	
MSA Counties	Black Hawk	797	124.9 (25)	Polk	2,368	97.9 (49)
	Dallas	168	79.1 (77)	Pottawattamie	654	136.8 (08)
	Dubuque	423	89.9 (60)	Scott	1,172	127.9 (22)
	Johnson	241	45.0 (99)	Warren	162	80.6 (75)
	Linn	866	79.2 (76)	Woodbury	859	130.0 (19)
State Total	15,370	102.0		7,710	101.1	

¹Rates per 1,000 live births

²Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

Low Birth Weight (< 2500 Grams) 1998-2001

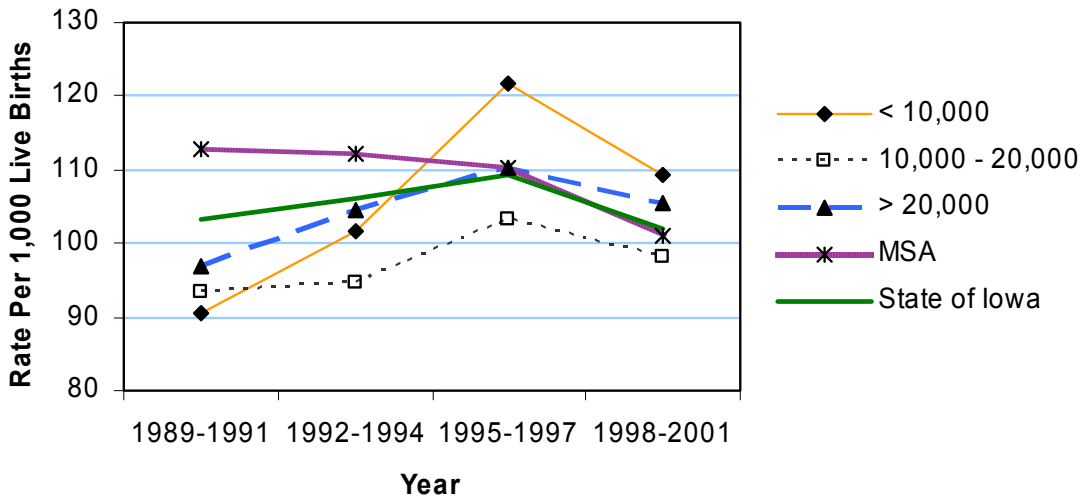
	Counties with Average Population < 10,000			Counties with Average Population 10,000 to 20,000			Counties with Average Population > 20,000			MSA Counties		
	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	10	35.7 (99)	Lucas	27	61.5 (51)	Lucas	27	61.5 (51)	Polk	1,589	65.7 (31)
	Adams	10	58.8 (61)	Monroe	19	52.5 (82)	Lee	125	72.0 (17)	Pottawattamie	331	69.2 (20)
	Audubon	13	52.4 (83)	Osceola	24	81.1 (04)	Mahaska	77	66.1 (29)	Scott	601	65.6 (32)
	Clarke	35	79.9 (06)	Pocahontas	16	55.0 (76)	Marion	91	56.9 (68)	Warren	125	62.2 (49)
	Davis	24	52.4 (84)	Ringgold	17	68.5 (22)	Marshall	122	55.9 (71)	Woodbury	457	69.2 (21)
	Decatur	20	54.8 (79)	Taylor	33	109.6 (01)	Muscatine	135	53.5 (81)	Total	4,919	64.5
	Fremont	23	64.1 (43)	Van Buren	18	47.2 (94)	Plymouth	58	48.9 (89)			
	Howard	30	66.8 (26)	Wayne	23	77.7 (08)	Sioux	69	39.9 (96)			
	Ida	19	59.6 (59)	Worth	31	92.0 (02)	Story	207	57.4 (65)			
				Total	392	64.9	Wapello	130	78.2 (07)			
Counties with Average Population 10,000 to 20,000	Allamakee	34	49.6 (88)	Humboldt	22	48.6 (91)	Washington	78	64.5 (38)			
	Appanoose	43	72.5 (15)	Iowa	47	65.7 (30)	Webster	125	62.4 (48)			
	Butler	36	57.5 (64)	Jefferson	45	71.5 (19)	Winneshiek	46	58.3 (63)			
	Calhoun	32	76.4 (09)	Keokuk	35	64.0 (44)	Total	2,451	61.2			
	Cass	30	48.9 (90)	Kossuth	43	65.3 (33)						
	Cedar	31	40.8 (95)	Louisa	40	60.6 (56)						
	Cherokee	27	51.1 (87)	Lyon	31	51.4 (86)						
	Chickasaw	34	59.3 (60)	Madison	42	58.3 (62)						
	Clay	51	65.2 (34)	Mills	44	64.1 (41)						
	Clayton	39	48.1 (93)	Mitchell	20	37.1 (97)						
	Crawford	50	61.6 (50)	Monona	24	56.5 (70)						
	Delaware	48	54.9 (77)	Montgomery	43	74.9 (10)						
	Dickinson	43	65.0 (35)	O'Brien	25	37.0 (98)						
	Emmet	28	55.9 (72)	Page	48	67.2 (25)						
	Floyd	40	51.5 (85)	Palo Alto	26	61.3 (52)						
	Franklin	34	72.0 (16)	Poweshiek	43	54.8 (78)						
	Greene	28	63.8 (46)	Sac	38	80.0 (05)						
	Grundy	32	64.3 (40)	Shelby	40	73.3 (12)						
	Guthrie	30	56.5 (69)	Tama	54	56.9 (67)						
	Hamilton	48	60.4 (57)	Union	36	64.6 (36)						
Hancock	35	66.5 (27)	Winnebago	42	81.9 (03)							
Hardin	64	72.6 (14)	Wright	43	67.4 (24)							
Harrison	42	60.2 (58)	Total	1,710	60.3							
Counties with Average Population > 20,000	Benton	81	66.4 (28)	Jones	49	60.9 (54)						
	Boone	83	68.0 (23)	Lee	125	72.0 (17)						
	Bremer	45	48.2 (92)	Mahaska	77	66.1 (29)						
	Buchanan	78	64.5 (37)	Marion	91	56.9 (68)						
	Buena Vista	62	64.4 (39)	Marshall	122	55.9 (71)						
	Carrroll	55	55.8 (73)	Muscatine	135	53.5 (81)						
	Cerro Gordo	132	63.4 (47)	Plymouth	58	48.9 (89)						
	Clinton	183	72.9 (13)	Sioux	69	39.9 (96)						
	Des Moines	134	64.1 (42)	Story	207	57.4 (65)						
	Fayette	49	54.1 (80)	Wapello	130	78.2 (07)						
	Henry	70	71.7 (18)	Washington	78	64.5 (38)						
	Jackson	58	61.0 (53)	Webster	125	62.4 (48)						
	Jasper	109	60.7 (55)	Winneshiek	46	58.3 (63)						
				Total	2,451	61.2						
MSA Counties	Black Hawk	474	74.3 (11)	Polk	1,589	65.7 (31)						
	Dallas	117	55.1 (74)	Pottawattamie	331	69.2 (20)						
	Dubuque	259	55.0 (75)	Scott	601	65.6 (32)						
	Johnson	343	64.0 (45)	Warren	125	62.2 (49)						
	Linn	623	56.9 (66)	Woodbury	457	69.2 (21)						
State Total	9,472	62.9										

¹Rates per 1,000 live births
²Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

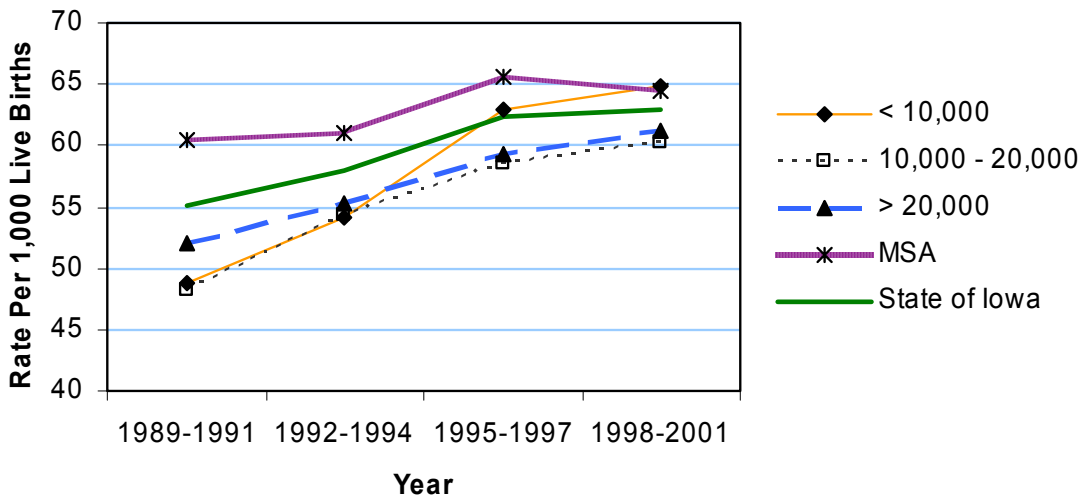
Mothers Under Age 20 1989-2001

Crude Rates



Low Birth Weight (<2500 Grams) 1989-2001

Crude Rates



Mothers Who Began Prenatal Care in the First Trimester 1998-2001

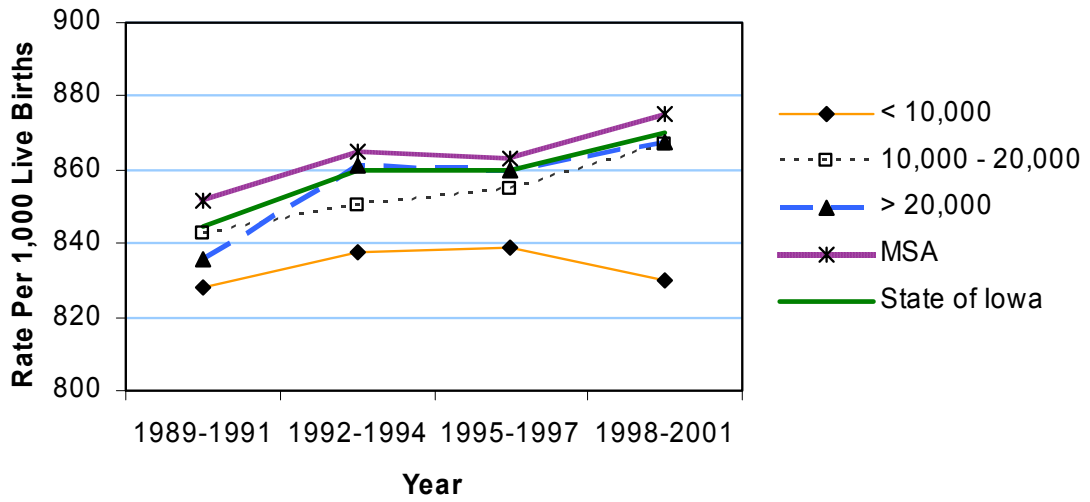
	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	253	903.6 (20)	Lucas	355	808.7 (89)
	Adams	140	823.5 (82)	Monroe	309	853.6 (62)
	Audubon	226	911.3 (12)	Osceola	260	878.4 (42)
	Clarke	382	872.1 (50)	Pocahontas	264	907.2 (14)
	Davis	285	622.3 (99)	Ringgold	206	830.6 (78)
	Decatur	297	813.7 (87)	Taylor	250	830.6 (79)
	Fremont	304	846.8 (67)	Van Buren	294	771.7 (94)
	Howard	363	808.5 (90)	Wayne	235	793.9 (91)
	Ida	295	924.8 (05)	Worth	291	863.5 (56)
				Total	5,009	829.7
Counties with Average Population 10,000 to 20,000	Allamakee	563	820.7 (84)	Humboldt	391	863.1 (58)
	Appanoose	501	844.9 (69)	Iowa	647	904.9 (19)
	Butler	575	918.5 (10)	Jefferson	534	849.0 (65)
	Calhoun	373	890.2 (33)	Keokuk	470	859.2 (61)
	Cass	556	905.5 (18)	Kossuth	573	870.8 (51)
	Cedar	680	894.7 (32)	Louisa	563	853.0 (64)
	Cherokee	479	907.2 (15)	Lyon	528	875.6 (47)
	Chickasaw	503	877.8 (44)	Madison	665	923.6 (06)
	Clay	719	919.4 (09)	Mills	594	865.9 (54)
	Clayton	660	813.8 (86)	Mitchell	407	755.1 (97)
	Crawford	668	822.7 (83)	Monona	383	901.2 (26)
	Delaware	771	882.2 (40)	Montgomery	510	888.5 (35)
	Dickinson	611	923.0 (07)	O'Brien	634	937.9 (03)
	Emmet	425	848.3 (66)	Page	645	903.4 (21)
	Floyd	558	719.1 (98)	Palo Alto	383	903.3 (22)
	Franklin	360	762.7 (96)	Poweshiek	708	903.1 (24)
	Greene	369	840.5 (70)	Sac	417	877.9 (43)
	Grundy	472	947.8 (02)	Shelby	489	895.6 (30)
	Guthrie	453	853.1 (63)	Tama	776	817.7 (85)
	Hamilton	722	908.2 (13)	Union	481	863.6 (55)
Hancock	439	834.6 (74)	Winnebago	429	836.3 (72)	
Hardin	757	859.3 (60)	Wright	519	813.5 (88)	
Harrison	609	872.5 (49)	Total	24,569	866.9	
Counties with Average Population > 20,000	Benton	1,079	884.4 (38)	Jones	711	884.3 (39)
	Boone	1,100	900.9 (27)	Lee	1,511	870.4 (52)
	Bremer	875	936.8 (04)	Mahaska	1,020	875.5 (48)
	Buchanan	944	780.8 (93)	Marion	1,445	903.1 (23)
	Buena Vista	740	768.4 (95)	Marshall	1,800	825.3 (81)
	Carrroll	944	957.4 (01)	Muscatine	2,242	888.3 (36)
	Cerro Gordo	1,722	827.5 (80)	Plymouth	1,074	906.3 (17)
	Clinton	2,198	875.7 (46)	Sioux	1,539	890.1 (34)
	Des Moines	1,739	831.7 (77)	Story	3,271	906.3 (16)
	Fayette	796	879.6 (41)	Wapello	1,310	787.7 (92)
	Henry	846	866.8 (53)	Washington	1,024	846.3 (68)
	Jackson	843	886.4 (37)	Webster	1,672	834.3 (75)
	Jasper	1,618	901.4 (25)	Winneshiek	680	861.9 (59)
				Total	34,743	867.7
MSA Counties	Black Hawk	5,745	900.6 (28)	Polk	21,202	876.9 (45)
	Dallas	1,833	863.4 (57)	Pottawattamie	3,985	833.3 (76)
	Dubuque	4,212	895.2 (31)	Scott	7,675	837.4 (71)
	Johnson	4,903	914.6 (11)	Warren	1,853	921.4 (08)
	Linn	9,812	896.8 (29)	Woodbury	5,519	835.5 (73)
State Total	131,060	869.8	Total	66,739	875.3	

¹Rates per 1,000 live births
²Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

Mothers Who Began Prenatal Care in the First Trimester 1989-2001

Crude Rates



Mothers Who Smoked During Pregnancy 1998-2001

	Counties with Average Population < 10,000			Counties with Average Population 10,000 to 20,000			Counties with Average Population > 20,000			MSA Counties		
	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	53	189.3 (44)	Lucas	89	202.7 (30)						
	Adams	45	264.7 (03)	Monroe	77	212.7 (24)						
	Audubon	44	177.4 (53)	Osceola	46	155.4 (73)						
	Clarke	103	235.2 (15)	Pocahontas	55	189.0 (45)						
	Davis	44	96.1 (95)	Ringgold	40	161.3 (66)						
	Decatur	87	238.4 (13)	Taylor	68	225.9 (20)						
	Fremont	94	261.8 (05)	Van Buren	56	147.0 (79)						
	Howard	66	147.0 (78)	Wayne	70	236.5 (14)						
	Ida	36	112.9 (90)	Worth	55	163.2 (64)						
				Total	1,128	186.8						
Counties with Average Population 10,000 to 20,000	Allamakee	108	157.4 (69)	Humboldt	80	176.6 (54)						
	Appanoose	142	239.5 (12)	Iowa	84	117.5 (87)						
	Butler	105	167.7 (61)	Jefferson	97	154.2 (75)						
	Calhoun	81	193.3 (39)	Keokuk	83	151.7 (77)						
	Cass	156	254.1 (07)	Kossuth	101	153.5 (76)						
	Cedar	125	164.5 (63)	Louisa	93	140.9 (82)						
	Cherokee	121	229.2 (18)	Lyon	58	96.2 (94)						
	Chickasaw	89	155.3 (74)	Madison	125	173.6 (57)						
	Clay	154	196.9 (32)	Mills	178	259.5 (06)						
	Clayton	137	168.9 (59)	Mitchell	60	111.3 (91)						
	Crawford	159	195.8 (35)	Monona	80	188.2 (46)						
	Delaware	147	168.2 (60)	Montgomery	130	226.5 (19)						
	Dickinson	93	140.5 (83)	O'Brien	87	128.7 (86)						
	Emmet	102	203.6 (29)	Page	172	240.9 (11)						
	Floyd	121	155.9 (71)	Palo Alto	69	162.7 (65)						
	Franklin	75	158.9 (67)	Poweshiek	180	229.6 (17)						
	Greene	101	230.1 (16)	Sac	92	193.7 (38)						
	Grundy	52	104.4 (92)	Shelby	116	212.5 (25)						
	Guthrie	117	220.3 (21)	Tama	173	182.3 (51)						
	Hamilton	174	218.9 (22)	Union	146	262.1 (04)						
Hancock	82	155.9 (72)	Winnebago	80	155.9 (70)							
Hardin	173	196.4 (34)	Wright	117	183.4 (50)							
Harrison	146	209.2 (27)	Total	5,161	182.1							
Counties with Average Population > 20,000	Benton	227	186.1 (49)	Jones	154	191.5 (41)						
	Boone	240	196.6 (33)	Lee	439	252.9 (10)						
	Bremer	134	143.5 (80)	Mahaska	218	187.1 (48)						
	Buchanan	227	187.8 (47)	Marion	280	175.0 (55)						
	Buena Vista	110	114.2 (89)	Marshall	421	193.0 (40)						
	Carrroll	69	70.0 (98)	Muscatine	427	169.2 (58)						
	Cerro Gordo	405	194.6 (37)	Plymouth	153	129.1 (85)						
	Clinton	636	253.4 (09)	Sioux	109	63.0 (99)						
	Des Moines	530	253.5 (08)	Story	300	83.1 (96)						
	Fayette	173	191.2 (42)	Wapello	331	199.0 (31)						
	Henry	207	212.1 (26)	Washington	139	114.9 (88)						
	Jackson	181	190.3 (43)	Webster	533	266.0 (02)						
	Jasper	387	215.6 (23)	Winneshiek	80	101.4 (93)						
				Total	7,110	177.6						
MSA Counties	Black Hawk	1,246	195.3 (36)	Polk	4,021	166.3 (62)						
	Dallas	303	142.7 (81)	Pottawattamie	1,425	298.0 (01)						
	Dubuque	612	130.1 (84)	Scott	1,881	205.2 (28)						
	Johnson	388	72.4 (97)	Warren	319	158.6 (68)						
	Linn	1,914	174.9 (56)	Woodbury	1,191	180.3 (52)						
	State Total	26,699	177.2	Total	13,300	174.4						

¹Rates per 1,000 live births
²Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

Mothers Who Drank During Pregnancy 1998-2001

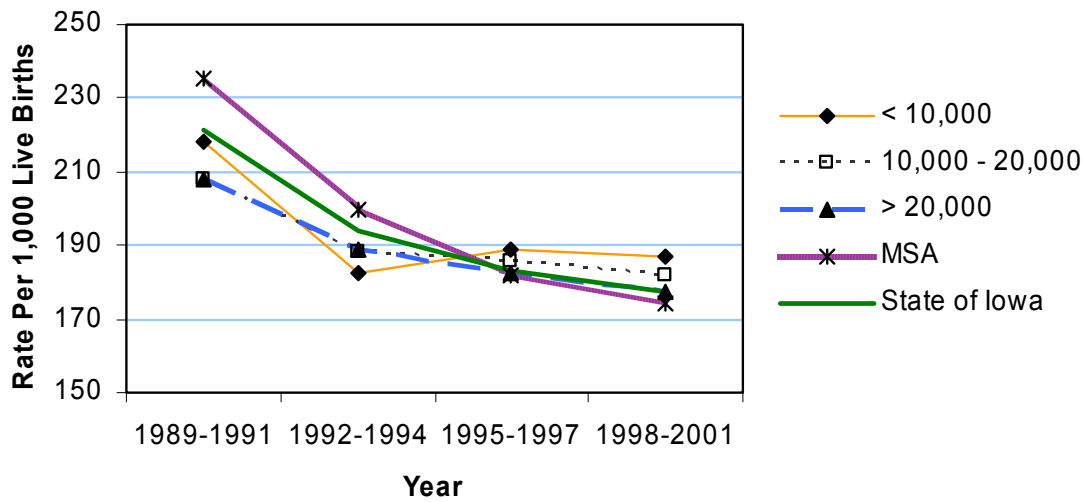
	County			County		
	County	#	Crude ¹	County	#	Crude ¹
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monroe	*	*
	Audubon	*	*	Osceola	*	*
	Clarke	*	*	Pocahontas	*	*
	Davis	*	*	Ringgold	*	*
	Decatur	*	*	Taylor	*	*
	Fremont	*	*	Van Buren	*	*
	Howard	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				Total	35	5.8
Counties with Average Population 10,000 to 20,000	Allamakee	*	*	Humboldt	*	*
	Appanoose	9	15.2	Iowa	7	9.8
	Butler	*	*	Jefferson	*	*
	Calhoun	*	*	Keokuk	6	11.0
	Cass	8	13.0	Kossuth	6	9.1
	Cedar	11	14.5	Louisa	*	*
	Cherokee	*	*	Lyon	*	*
	Chickasaw	*	*	Madison	9	12.5
	Clay	6	7.7	Mills	11	16.0
	Clayton	11	13.6	Mitchell	2	3.7
	Crawford	6	7.4	Monona	2	4.7
	Delaware	20	22.9	Montgomery	7	12.2
	Dickinson	6	9.1	O'Brien	*	*
	Emmet	10	20.0	Page	8	11.2
	Floyd	5	6.4	Palo Alto	7	16.5
	Franklin	5	10.6	Poweshiek	12	15.3
	Greene	*	*	Sac	7	14.7
	Grundy	*	*	Shelby	6	11.0
	Guthrie	8	15.1	Tama	11	11.6
	Hamilton	7	8.8	Union	8	14.4
Hancock	5	9.5	Winnebago	*	*	
Hardin	5	5.7	Wright	11	17.2	
Harrison	9	12.9	Total	284	10.0	
Counties with Average Population > 20,000	Benton	35	28.7	Jones	26	32.3
	Boone	*	*	Lee	32	18.4
	Bremer	*	*	Mahaska	7	6.0
	Buchanan	7	5.8	Marion	7	4.4
	Buena Vista	14	14.5	Marshall	22	10.1
	Carroll	*	*	Muscatine	19	7.5
	Cerro Gordo	17	8.2	Plymouth	6	5.1
	Clinton	11	4.4	Sioux	12	6.9
	Des Moines	17	8.1	Story	46	12.7
	Fayette	7	7.7	Wapello	7	4.2
	Henry	7	7.2	Washington	9	7.4
	Jackson	9	9.5	Webster	31	15.5
	Jasper	27	15.0	Winneshiek	*	*
				Total	386	9.6
MSA Counties	Black Hawk	45	7.1	Polk	389	16.1
	Dallas	23	10.8	Pottawattamie	35	7.3
	Dubuque	52	11.1	Scott	275	30.0
	Johnson	49	9.1	Warren	18	9.0
	Linn	346	31.6	Woodbury	26	3.9
	State Total	1,963	13.0	Total	1,258	16.5

¹Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

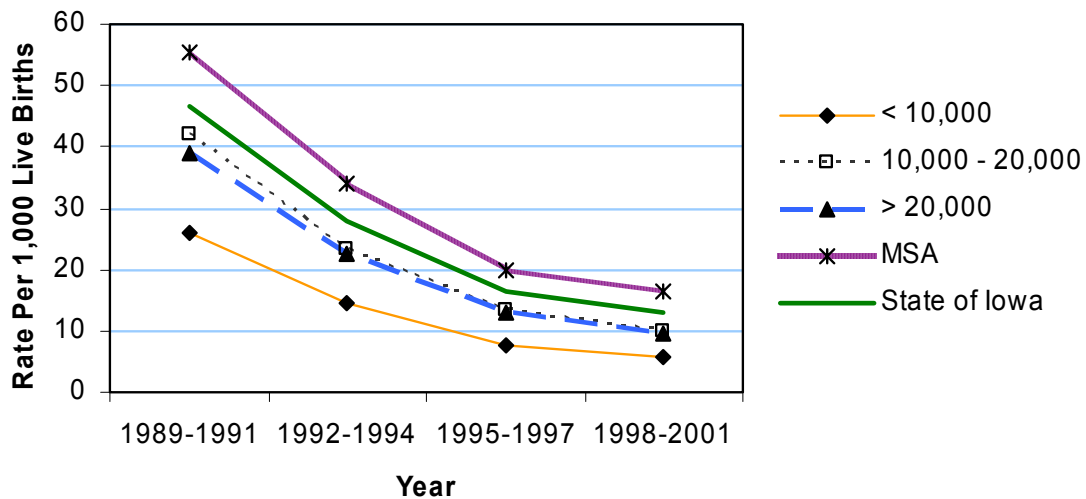
Mothers Who Smoked During Pregnancy 1989-2001

Crude Rates



Mothers Who Drank During Pregnancy 1989-2001

Crude Rates



Fetal Deaths 1998-2001

	County			County		
	County	#	Crude ¹	County	#	Crude ¹
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monroe	*	*
	Audubon	*	*	Osceola	*	*
	Clarke	*	*	Pocahontas	*	*
	Davis	6	13.1	Ringgold	*	*
	Decatur	*	*	Taylor	*	*
	Fremont	*	*	Van Buren	*	*
	Howard	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				Total	37	6.1
Counties with Average Population 10,000 to 20,000	Allamakee	*	*	Humboldt	*	*
	Appanoose	*	*	Iowa	*	*
	Butler	5	8.0	Jefferson	5	7.9
	Calhoun	*	*	Keokuk	5	9.1
	Cass	*	*	Kossuth	6	9.1
	Cedar	5	6.6	Louisa	*	*
	Cherokee	*	*	Lyon	*	*
	Chickasaw	*	*	Madison	9	12.5
	Clay	*	*	Mills	*	*
	Clayton	*	*	Mitchell	*	*
	Crawford	10	12.3	Monona	*	*
	Delaware	11	12.6	Montgomery	6	10.5
	Dickinson	*	*	O'Brien	6	8.9
	Emmet	*	*	Page	5	7.0
	Floyd	*	*	Palo Alto	*	*
	Franklin	*	*	Poweshiek	*	*
	Greene	6	13.7	Sac	6	12.6
	Grundy	*	*	Shelby	*	*
	Guthrie	*	*	Tama	5	5.3
	Hamilton	*	*	Union	*	*
Hancock	*	*	Winnebago	*	*	
Hardin	*	*	Wright	6	9.4	
Harrison	*	*	Total	173	6.1	
Counties with Average Population > 20,000	Benton	10	8.2	Jones	*	*
	Boone	7	5.7	Lee	14	8.1
	Bremer	5	5.4	Mahaska	*	*
	Buchanan	15	12.4	Marion	*	*
	Buena Vista	9	9.3	Marshall	5	2.3
	Carroll	*	*	Muscatine	26	10.3
	Cerro Gordo	13	6.2	Plymouth	8	6.8
	Clinton	16	6.4	Sioux	6	3.5
	Des Moines	15	7.2	Story	13	3.6
	Fayette	6	6.6	Wapello	5	3.0
	Henry	9	9.2	Washington	*	*
	Jackson	11	11.6	Webster	16	8.0
	Jasper	11	6.1	Winneshiek	*	*
				Total	239	6.0
MSA Counties	Black Hawk	44	6.9	Polk	123	5.1
	Dallas	11	5.2	Pottawattamie	18	3.8
	Dubuque	24	5.1	Scott	53	5.8
	Johnson	26	4.8	Warren	13	6.5
	Linn	69	6.3	Woodbury	38	5.8
	State Total	868	5.8	Total	419	5.5

¹Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

Neonatal Deaths 1998-2001

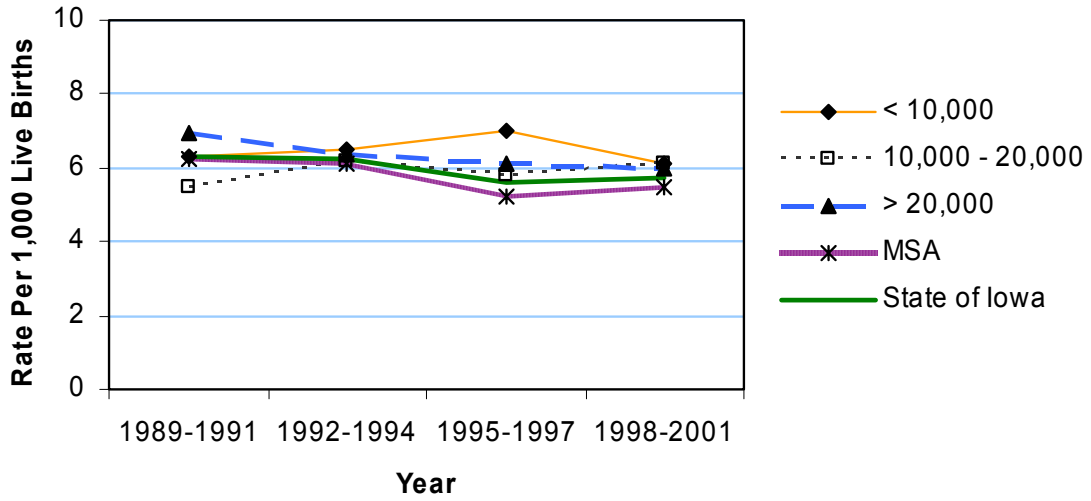
	County	#	Crude ¹	County	#	Crude ¹
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monroe	*	*
	Audubon	*	*	Osceola	*	*
	Clarke	*	*	Pocahontas	*	*
	Davis	*	*	Ringgold	*	*
	Decatur	*	*	Taylor	*	*
	Fremont	*	*	Van Buren	*	*
	Howard	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				Total	30	5.0
	Counties with Average Population 10,000 to 20,000	Allamakee	*	*	Humboldt	*
Appanoose		*	*	Iowa	*	*
Butler		*	*	Jefferson	*	*
Calhoun		*	*	Keokuk	*	*
Cass		*	*	Kossuth	*	*
Cedar		*	*	Louisa	*	*
Cherokee		*	*	Lyon	6	10.0
Chickasaw		*	*	Madison	*	*
Clay		*	*	Mills	*	*
Clayton		*	*	Mitchell	*	*
Crawford		*	*	Monona	*	*
Delaware		*	*	Montgomery	*	*
Dickinson		*	*	O'Brien	*	*
Emmet		*	*	Page	*	*
Floyd		*	*	Palo Alto	*	*
Franklin		*	*	Poweshiek	*	*
Greene		5	11.4	Sac	*	*
Grundy		*	*	Shelby	*	*
Guthrie		*	*	Tama	*	*
Hamilton		*	*	Union	*	*
Hancock	*	*	Winnebago	*	*	
Hardin	*	*	Wright	*	*	
Harrison	*	*	Total	94	3.3	
Counties with Average Population > 20,000	Benton	7	5.7	Jones	*	*
	Boone	6	4.9	Lee	9	5.2
	Bremer	*	*	Mahaska	8	6.9
	Buchanan	5	4.1	Marion	5	3.1
	Buena Vista	*	*	Marshall	7	3.2
	Carroll	*	*	Muscatine	5	2.0
	Cerro Gordo	*	*	Plymouth	*	*
	Clinton	8	3.2	Sioux	*	*
	Des Moines	9	4.3	Story	16	4.4
	Fayette	*	*	Wapello	5	3.0
	Henry	*	*	Washington	6	5.0
	Jackson	7	7.4	Webster	*	*
	Jasper	7	3.9	Winneshiek	*	*
				Total	139	3.5
MSA Counties	Black Hawk	24	3.8	Polk	120	5.0
	Dallas	7	3.3	Pottawattamie	17	3.6
	Dubuque	15	3.2	Scott	42	4.6
	Johnson	20	3.7	Warren	11	5.5
	Linn	39	3.6	Woodbury	24	3.6
				Total	319	4.2
State Total		582	3.9			

¹Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

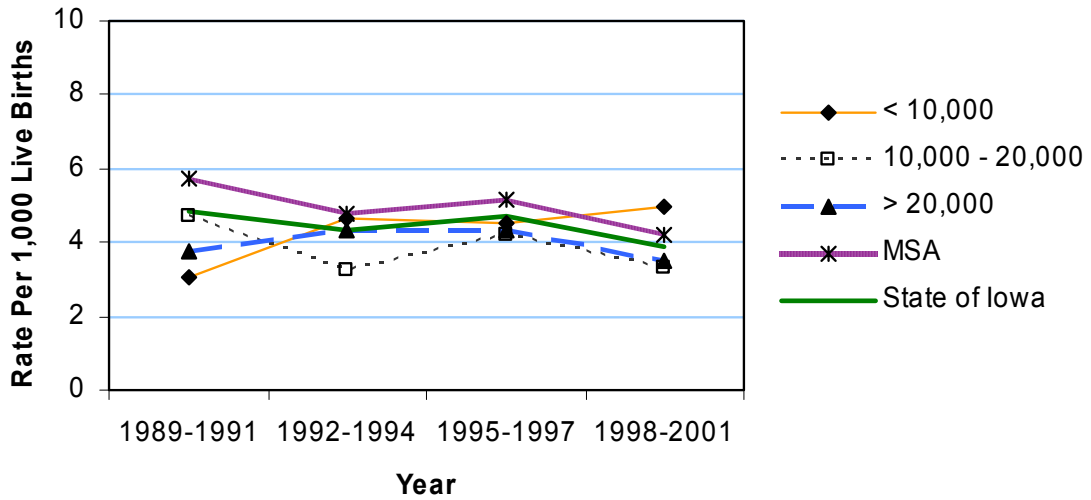
Fetal Deaths 1989-2001

Crude Rates



Neonatal Deaths 1989-2001

Crude Rates



Perinatal Deaths² 1998-2001

	Counties with Average Population < 10,000			Counties with Average Population 10,000 to 20,000			Counties with Average Population > 20,000			MSA Counties		
	County	#	Crude ¹	County	#	Crude ¹	County	#	Crude ¹	County	#	Crude ¹
Counties with Average Population < 10,000	Adair	*	*	Lucas	5	11.4						
	Adams	*	*	Monroe	*	*						
	Audubon	*	*	Osceola	*	*						
	Clarke	*	*	Pocahontas	*	*						
	Davis	8	17.5	Ringgold	*	*						
	Decatur	*	*	Taylor	*	*						
	Fremont	6	16.7	Van Buren	*	*						
	Howard	5	11.1	Wayne	5	16.9						
	Ida	5	15.7	Worth	*	*						
				Total	67	11.1						
Counties with Average Population 10,000 to 20,000	Allamakee	*	*	Humboldt	*	*						
	Appanoose	*	*	Iowa	7	9.8						
	Butler	8	12.8	Jefferson	6	9.5						
	Calhoun	*	*	Keokuk	6	11.0						
	Cass	6	9.8	Kossuth	9	13.7						
	Cedar	7	9.2	Louisa	*	*						
	Cherokee	*	*	Lyon	8	13.3						
	Chickasaw	*	*	Madison	13	18.1						
	Clay	7	9.0	Mills	*	*						
	Clayton	7	8.6	Mitchell	*	*						
	Crawford	13	16.0	Monona	*	*						
	Delaware	15	17.2	Montgomery	10	17.4						
	Dickinson	5	7.6	O'Brien	8	11.8						
	Emmet	*	*	Page	8	11.2						
	Floyd	*	*	Palo Alto	*	*						
	Franklin	*	*	Poweshiek	5	6.4						
	Greene	11	25.1	Sac	10	21.1						
	Grundy	7	14.1	Shelby	*	*						
	Guthrie	*	*	Tama	5	5.3						
	Hamilton	6	7.5	Union	8	14.4						
Hancock	*	*	Winnebago	*	*							
Hardin	7	7.9	Wright	7	11.0							
Harrison	*	*	Total	267	9.4							
Counties with Average Population > 20,000	Benton	17	13.9	Jones	5	6.2						
	Boone	13	10.6	Lee	23	13.2						
	Bremer	9	9.6	Mahaska	12	10.3						
	Buchanan	20	16.5	Marion	9	5.6						
	Buena Vista	11	11.4	Marshall	12	5.5						
	Carroll	*	*	Muscatine	31	12.3						
	Cerro Gordo	16	7.7	Plymouth	11	9.3						
	Clinton	24	9.6	Sioux	10	5.8						
	Des Moines	24	11.5	Story	29	8.0						
	Fayette	6	6.6	Wapello	10	6.0						
	Henry	12	12.3	Washington	10	8.3						
	Jackson	18	18.9	Webster	20	10.0						
	Jasper	18	10.0	Winneshiek	*	*						
				Total	378	9.4						
MSA Counties	Black Hawk	68	10.7	Polk	243	10.1						
	Dallas	18	8.5	Pottawattamie	35	7.3						
	Dubuque	39	8.3	Scott	95	10.4						
	Johnson	46	8.6	Warren	24	11.9						
	Linn	108	9.9	Woodbury	62	9.4						
State Total	1,450	9.6	Total	738	9.7							

¹Rates per 1,000 live births

²Includes Neonatal and Fetal Deaths

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

Infant Deaths 1998-2001

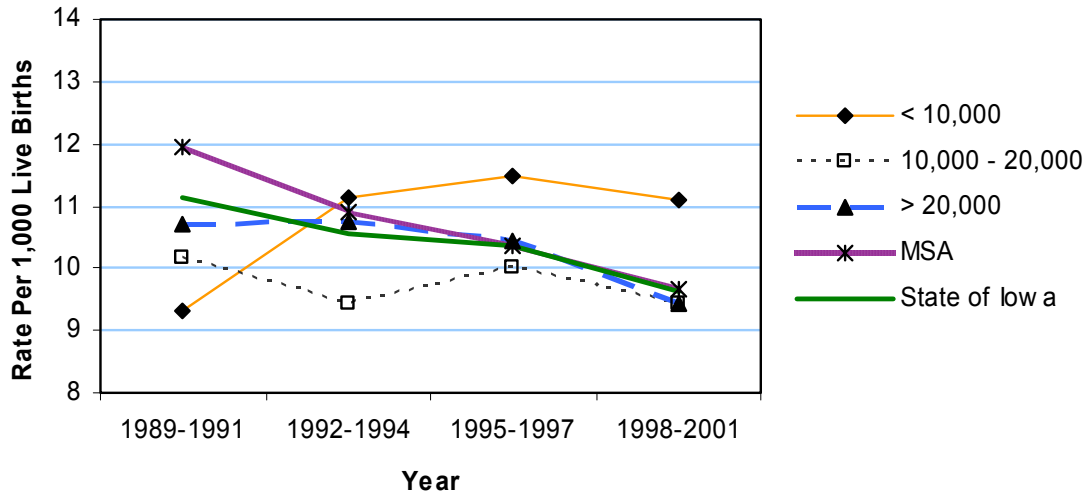
		County	#	Crude ¹	County	#	Crude ¹
Counties with Average Population < 10,000		Adair	*	*	Lucas	5	11.4
		Adams	*	*	Monroe	*	*
		Audubon	*	*	Osceola	*	*
		Clarke	*	*	Pocahontas	*	*
		Davis	*	*	Ringgold	*	*
		Decatur	5	13.7	Taylor	*	*
		Fremont	*	*	Van Buren	*	*
		Howard	*	*	Wayne	*	*
		Ida	*	*	Worth	5	14.8
					Total	43	7.1
Counties with Average Population 10,000 to 20,000		Allamakee	*	*	Humboldt	*	*
		Appanoose	*	*	Iowa	*	*
		Butler	*	*	Jefferson	*	*
		Calhoun	*	*	Keokuk	*	*
		Cass	*	*	Kossuth	*	*
		Cedar	*	*	Louisa	*	*
		Cherokee	*	*	Lyon	7	11.6
		Chickasaw	*	*	Madison	7	9.7
		Clay	5	6.4	Mills	*	*
		Clayton	*	*	Mitchell	*	*
		Crawford	5	6.2	Monona	*	*
		Delaware	6	6.9	Montgomery	6	10.5
		Dickinson	*	*	O'Brien	5	7.4
		Emmet	*	*	Page	6	8.4
		Floyd	*	*	Palo Alto	*	*
		Franklin	*	*	Poweshiek	*	*
		Greene	6	13.7	Sac	*	*
		Grundy	5	10.0	Shelby	5	9.2
		Guthrie	*	*	Tama	7	7.4
		Hamilton	7	8.8	Union	7	12.6
	Hancock	*	*	Winnebago	*	*	
	Hardin	5	5.7	Wright	*	*	
	Harrison	*	*	Total	151	5.3	
Counties with Average Population > 20,000		Benton	8	6.6	Jones	*	*
		Boone	10	8.2	Lee	14	8.1
		Bremer	5	5.4	Mahaska	14	12.0
		Buchanan	6	5.0	Marion	5	3.1
		Buena Vista	*	*	Marshall	11	5.0
		Carroll	*	*	Muscatine	8	3.2
		Cerro Gordo	8	3.8	Plymouth	12	10.1
		Clinton	17	6.8	Sioux	5	2.9
		Des Moines	11	5.3	Story	22	6.1
		Fayette	*	*	Wapello	8	4.8
		Henry	5	5.1	Washington	9	7.4
		Jackson	8	8.4	Webster	9	4.5
		Jasper	9	5.0	Winneshiek	*	*
					Total	214	5.3
MSA Counties		Black Hawk	37	5.8	Polk	173	7.2
		Dallas	13	6.1	Pottawattamie	32	6.7
		Dubuque	26	5.5	Scott	69	7.5
		Johnson	29	5.4	Warren	15	7.5
		Linn	55	5.0	Woodbury	51	7.7
		Total	908	6.0	Total	500	6.6

¹Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

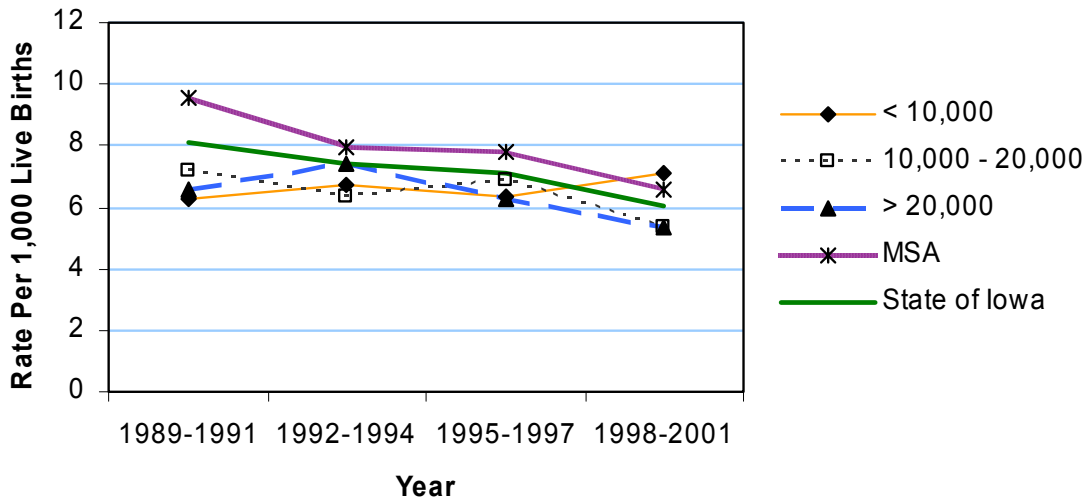
Perinatal Deaths 1989-2001

Crude Rates



Infant Deaths 1989-2001

Crude Rates



Congenital Malformations 1998-2001

	Counties with Average Population < 10,000			Counties with Average Population 10,000 to 20,000			Counties with Average Population > 20,000			MSA Counties		
	County	#	Crude ¹	County	#	Crude ¹	County	#	Crude ¹	County	#	Crude ¹
Counties with Average Population < 10,000	Adair	5	17.9	Lucas	7	15.9						
	Adams	*	*	Monroe	5	13.8						
	Audubon	6	24.2	Osceola	8	27.0						
	Clarke	*	*	Pocahontas	5	17.2						
	Davis	10	21.8	Ringgold	6	24.2						
	Decatur	5	13.7	Taylor	*	*						
	Fremont	8	22.3	Van Buren	*	*						
	Howard	12	26.7	Wayne	*	*						
	Ida	5	15.7	Worth	5	14.8						
				Total	105	17.4						
Counties with Average Population 10,000 to 20,000	Allamakee	11	16.0	Humboldt	*	*						
	Appanoose	10	16.9	Iowa	7	9.8						
	Butler	*	*	Jefferson	13	20.7						
	Calhoun	7	16.7	Keokuk	6	11.0						
	Cass	8	13.0	Kossuth	10	15.2						
	Cedar	6	7.9	Louisa	7	10.6						
	Cherokee	11	20.8	Lyon	8	13.3						
	Chickasaw	12	20.9	Madison	5	6.9						
	Clay	21	26.9	Mills	11	16.0						
	Clayton	16	19.7	Mitchell	13	24.1						
	Crawford	9	11.1	Monona	*	*						
	Delaware	21	24.0	Montgomery	16	27.9						
	Dickinson	5	7.6	O'Brien	7	10.4						
	Emmet	13	25.9	Page	12	16.8						
	Floyd	9	11.6	Palo Alto	10	23.6						
	Franklin	11	23.3	Poweshiek	10	12.8						
	Greene	9	20.5	Sac	*	*						
	Grundy	5	10.0	Shelby	15	27.5						
	Guthrie	*	*	Tama	7	7.4						
	Hamilton	6	7.5	Union	5	9.0						
Hancock	6	11.4	Winnebago	*	*							
Hardin	9	10.2	Wright	12	18.8							
Harrison	8	11.5	Total	408	14.4							
Counties with Average Population > 20,000	Benton	10	8.2	Jones	8	10.0						
	Boone	12	9.8	Lee	19	10.9						
	Bremer	9	9.6	Mahaska	16	13.7						
	Buchanan	13	10.8	Marion	28	17.5						
	Buena Vista	10	10.4	Marshall	21	9.6						
	Carroll	12	12.2	Muscatine	31	12.3						
	Cerro Gordo	28	13.5	Plymouth	14	11.8						
	Clinton	39	15.5	Sioux	22	12.7						
	Des Moines	34	16.3	Story	21	5.8						
	Fayette	21	23.2	Wapello	33	19.8						
	Henry	30	30.7	Washington	22	18.2						
	Jackson	10	10.5	Webster	20	10.0						
	Jasper	14	7.8	Winneshiek	13	16.5						
				Total	510	12.7						
MSA Counties	Black Hawk	54	8.5	Polk	142	5.9						
	Dallas	13	6.1	Pottawattamie	75	15.7						
	Dubuque	36	7.7	Scott	107	11.7						
	Johnson	65	12.1	Warren	7	3.5						
	Linn	116	10.6	Woodbury	38	5.8						
	State Total	1,676	11.1	Total	653	8.6						

¹Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates

Birth Defects 1998-2000

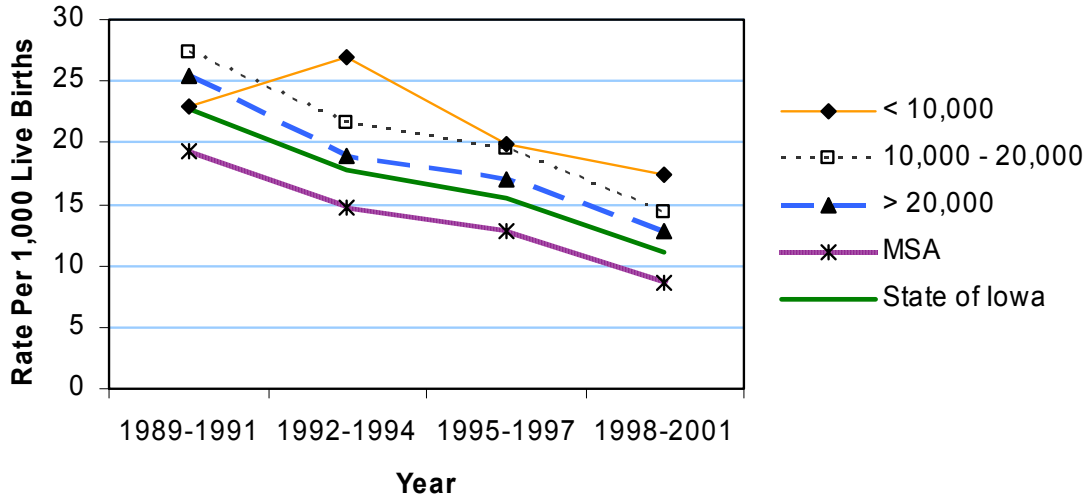
	Counties with Average Population < 10,000			Counties with Average Population 10,000 to 20,000			Counties with Average Population > 20,000			MSA Counties		
	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)	County	#	Crude ¹ (Rank ²)
Counties with Average Population < 10,000	Adair	7	32.6 (82)	Lucas	14	42.3 (52)	Lucas	14	42.3 (52)	Polk	823	45.6 (36)
	Adams	11	83.3 (01)	Monroe	12	43.0 (45)	Lee	59	44.5 (40)	Pottawattamie	103	28.9 (90)
	Audubon	7	37.4 (71)	Osceola	9	40.5 (62)	Mahaska	42	48.3 (26)	Scott	283	40.7 (61)
	Clarke	13	42.9 (46)	Pocahontas	14	61.9 (06)	Marion	52	42.7 (48)	Warren	58	38.7 (65)
	Davis	14	42.0 (53)	Ringgold	7	37.8 (68)	Marshall	48	29.3 (89)	Woodbury	190	38.1 (67)
	Decatur	12	42.4 (51)	Taylor	9	41.1 (59)	Muscatine	80	42.8 (47)	Total	2,627	46.0
	Fremont	6	22.3 (95)	Van Buren	15	51.9 (19)	Plymouth	43	47.6 (30)			
	Howard	9	26.5 (93)	Wayne	13	61.9 (07)	Sioux	37	29.5 (88)			
	Ida	13	54.2 (16)	Worth	17	68.0 (04)	Story	90	33.5 (79)			
				Total	202	44.8	Wapello	65	53.3 (17)			
							Washington	41	46.6 (33)			
Counties with Average Population 10,000 to 20,000	Allamakee	14	27.1 (92)	Humboldt	14	41.7 (55)	Webster	102	67.9 (05)			
	Appanoose	20	44.2 (42)	Iowa	31	57.9 (11)	Winneshiek	12	20.5 (96)			
	Butler	25	50.9 (21)	Jefferson	29	61.1 (08)	Total	1,299	43.2			
	Calhoun	14	43.2 (44)	Keokuk	23	54.6 (14)						
	Cass	19	41.6 (57)	Kossuth	20	39.9 (64)						
	Cedar	28	49.0 (23)	Louisa	21	41.9 (54)						
	Cherokee	19	46.2 (35)	Lyon	6	13.0 (98)						
	Chickasaw	10	23.1 (94)	Madison	20	36.5 (75)						
	Clay	28	48.4 (25)	Mills	6	11.9 (99)						
	Clayton	27	45.5 (37)	Mitchell	14	36.2 (77)						
	Crawford	19	32.4 (83)	Monona	13	41.7 (55)						
	Delaware	31	46.3 (34)	Montgomery	18	41.2 (58)						
	Dickinson	10	19.7 (97)	O'Brien	15	28.5 (91)						
	Emmet	16	42.6 (50)	Page	25	45.0 (38)						
	Floyd	28	47.7 (29)	Palo Alto	10	31.2 (85)						
	Franklin	27	78.3 (02)	Poweshiek	22	37.7 (70)						
	Greene	12	36.7 (72)	Sac	16	42.7 (49)						
	Grundy	18	48.3 (27)	Shelby	21	48.5 (24)						
	Guthrie	13	32.8 (81)	Tama	37	51.9 (20)						
Hamilton	19	30.8 (86)	Union	16	37.8 (69)							
Hancock	15	38.2 (66)	Winnebago	14	36.6 (73)							
Hardin	33	50.8 (22)	Wright	23	47.7 (28)							
Harrison	16	29.7 (87)	Total	875	40.9							
Counties with Average Population > 20,000	Benton	32	35.0 (78)	Jones	22	36.3 (76)						
	Boone	34	36.6 (74)	Lee	59	44.5 (40)						
	Bremer	33	47.4 (31)	Mahaska	42	48.3 (26)						
	Buchanan	54	59.5 (09)	Marion	52	42.7 (48)						
	Buena Vista	24	33.2 (80)	Marshall	48	29.3 (89)						
	Carrroll	40	52.6 (18)	Muscatine	80	42.8 (47)						
	Cerro Gordo	75	46.7 (32)	Plymouth	43	47.6 (30)						
	Clinton	82	43.2 (43)	Sioux	37	29.5 (88)						
	Des Moines	65	40.9 (60)	Story	90	33.5 (79)						
	Fayette	40	57.3 (12)	Wapello	65	53.3 (17)						
	Henry	52	68.4 (03)	Washington	41	46.6 (33)						
	Jackson	32	44.9 (39)	Webster	102	67.9 (05)						
	Jasper	43	32.2 (84)	Winneshiek	12	20.5 (96)						
			Total	1,299	43.2							
MSA Counties	Black Hawk	273	57.1 (13)	Polk	823	45.6 (36)						
	Dallas	64	40.1 (63)	Pottawattamie	103	28.9 (90)						
	Dubuque	156	44.2 (41)	Scott	283	40.7 (61)						
	Johnson	236	59.2 (10)	Warren	58	38.7 (65)						
	Linn	441	54.5 (15)	Woodbury	190	38.1 (67)						
State Total	5,003	44.3										

¹Rates per 1,000 population
²Rank among 99 Iowa counties

Source: Iowa Birth Defects Registry, The University of Iowa

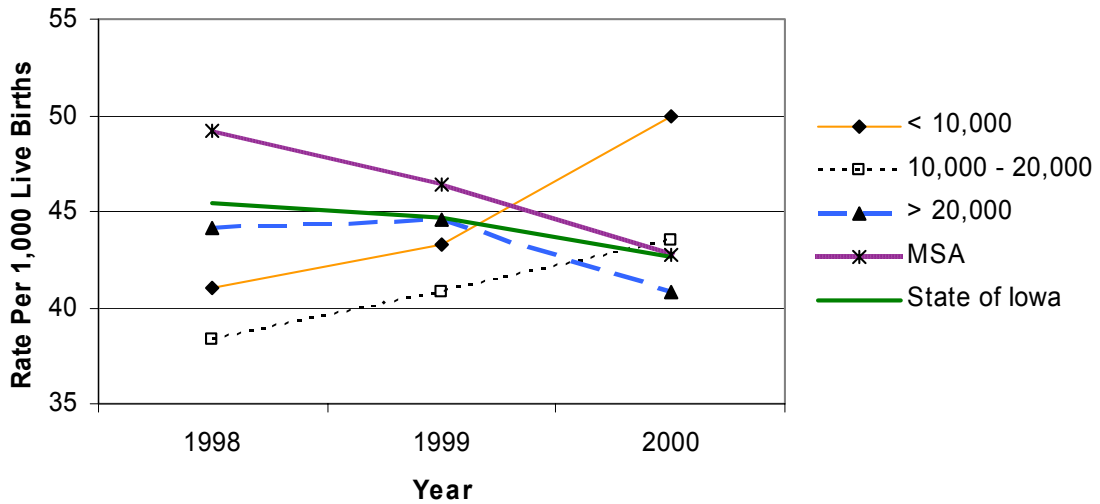
Congenital Malformations 1989-2001

Crude Rates



Birth Defects 1998-2000

Annual Crude Rates



Selected Birth Defects in Iowa 1998-2000

Defect Name	Defects	Crude Rate ¹
Anencephalous	33	0.29
Aniridia	35	0.31
Anophthalmos Microphthal	24	0.21
Aortic Valve Stenosis and Atresia	154	1.36
Atrial Septal Defect	832	7.36
Bladder Exstrophy	8	0.07
Cleft Lip	142	1.26
Cleft Palate without Cleft Lip	57	0.50
Club foot without CNS Defect	292	2.58
Coarctation of Aorta	93	0.82
Coloboma Of Eye	15	0.13
Common Truncus	17	0.15
Congenital Arthrogryposis	50	0.44
Congenital Cataract	42	0.37
Conus Arteriosus	114	1.01
Down Syndrome (Trisomy 21)	152	1.34
Encephalocele	9	0.08
Endocardial Cushion Defect	59	0.52
Gastroschisis	56	0.50
Hydrocephalus without Spina Bifida	111	0.98
Hypoplastic Left Heart Syndrome	64	0.57
Lung Agenesis and Hypoplasia	41	0.36
Microcephalus	101	0.89
Omphalocele	31	0.27
Patent Ductus Arteriosus	463	4.10
Pulmonary Artery Anomaly	230	2.03
Pulmonary Valve Stenosis and Atresia	204	1.80
Rectal and Intestinal Atresia and Stenosis	45	0.40
Reduction Deformity of Lower Limbs	31	0.27
Reduction Deformity of Upper Limbs	61	0.54
Renal Agenesis	58	0.51
Spina Bifida without Anencephalous	50	0.44
Tetralogy of Fallot	36	0.32
Tracheo-Esophageal Anomalies	30	0.27
Transposition of Great Arteries	62	0.55
Tricuspid Valve Stenosis and Atresia	335	2.96
Trisomy 13 (Patau's Syndrome)	16	0.14
Trisomy 18 (Edward's Syndrome)	27	0.24
Ventricular Septal Defect	506	4.48

¹Rates per 1,000 live births

Source: Iowa Birth Defects Registry, The University of Iowa