

## 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) multiple births; (2) cigarette smoking during pregnancy; (3) substance abuse immediately prior to conception and during pregnancy (including alcohol abuse); (4) maternal age extremes; and (5) short inter-pregnancy interval.

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<sup>1</sup>

- ✓ 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.

<sup>1</sup>Source: March of Dimes perinatal statistics: [www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats)

## Live Births 2002-2003

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with 2004 Population < 10,000	Adair	155	9.7 (91)	Monona	200	10.2 (81)	
	Adams	89	10.1 (84)	Monroe	175	11.2 (53)	
	Audubon	118	9.0 (96)	Osceola	154	11.3 (48)	
	Clarke	245	13.3 (16)	Palo Alto	225	11.5 (45)	
	Davis	244	14.2 (07)	Pocahontas	143	8.6 (99)	
	Decatur	180	10.5 (77)	Ringgold	117	10.9 (62)	
	Fremont	167	10.7 (70)	Taylor	135	9.9 (87)	
	Howard	211	10.7 (68)	Van Buren	169	10.9 (64)	
	Ida	168	11.1 (57)	Wayne	157	11.8 (40)	
	Lucas	208	11.0 (61)	Worth	153	9.9 (89)	
				<b>Total</b>	<b>3,413</b>	<b>10.9</b>	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	356	12.3 (30)	Hardin	403	11.0 (60)
		Appanoose	336	12.4 (27)	Humboldt	215	10.6 (73)
Butler		317	10.5 (75)	Iowa	376	11.8 (39)	
Calhoun		185	8.6 (98)	Jefferson	295	9.2 (92)	
Cass		298	10.4 (78)	Keokuk	271	11.9 (38)	
Cedar		388	10.6 (71)	Kossuth	329	10.0 (86)	
Cherokee		230	9.1 (95)	Louisa	340	13.9 (11)	
Chickasaw		284	11.1 (54)	Lyon	321	13.7 (14)	
Clay		412	12.1 (32)	Mitchell	246	11.3 (47)	
Clayton		390	10.6 (74)	Montgomery	254	11.2 (52)	
Crawford		457	13.5 (15)	O'Brien	327	11.1 (55)	
Delaware		428	11.7 (42)	Page	337	10.3 (80)	
Dickinson		334	10.2 (83)	Poweshiek	386	10.2 (82)	
Emmet		281	13.0 (21)	Sac	202	9.2 (93)	
Floyd		357	10.8 (66)	Shelby	280	10.9 (63)	
Franklin		241	11.3 (49)	Tama	459	12.8 (23)	
Greene		204	10.1 (85)	Union	282	11.7 (43)	
Hamilton		360	11.0 (58)	Winnebago	222	9.7 (90)	
Hancock	218	9.2 (94)	Wright	342	12.3 (28)		
			<b>Total</b>	<b>11,963</b>	<b>11.1</b>		
Counties with 2004 Population > 20,000	Boone	610	11.7 (44)	Lee	797	10.8 (65)	
	Buchanan	602	14.4 (05)	Mahaska	531	11.9 (35)	
	Buena Vista	506	12.5 (25)	Marion	815	12.5 (24)	
	Carroll	506	12.0 (34)	Marshall	1,111	14.2 (08)	
	Cerro Gordo	996	11.0 (59)	Muscatine	1,244	14.8 (03)	
	Clinton	1,122	11.3 (50)	Plymouth	608	12.3 (29)	
	Des Moines	993	12.0 (33)	Sioux	921	14.4 (06)	
	Fayette	444	10.3 (79)	Wapello	936	13.0 (20)	
	Henry	434	10.8 (67)	Webster	948	11.9 (36)	
	Jackson	432	10.7 (69)	Winneshiek	376	8.8 (97)	
	Jasper	897	11.9 (37)	<b>Total</b>	<b>15,829</b>	<b>12.2</b>	
	MSA Counties	Benton	636	12.1 (31)	Linn	5,505	14.1 (10)
Black Hawk		3,149	12.5 (26)	Madison	402	13.8 (12)	
Bremer		497	10.6 (72)	Mills	332	11.2 (51)	
Dallas		1,197	13.2 (18)	Polk	12,511	16.2 (01)	
Dubuque		2,382	13.2 (17)	Pottawattamie	2,437	13.8 (13)	
Grundy		244	9.9 (88)	Scott	4,508	14.2 (09)	
Guthrie		299	13.1 (19)	Story	1,834	11.4 (46)	
Harrison		347	11.1 (56)	Warren	985	11.8 (41)	
Johnson		2,957	12.9 (22)	Washington	623	14.7 (04)	
Jones		428	10.5 (76)	Woodbury	3,216	15.6 (02)	
				<b>Total</b>	<b>44,489</b>	<b>14.0</b>	
<b>State Total</b>	<b>75,694</b>	<b>12.9</b>					

<sup>1</sup>Rates per 1,000 population  
<sup>2</sup>Rank among 99 Iowa counties

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

## Out-of-Wedlock Births 2002-2003

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with 2004 Population < 10,000	Adair	29	187.1 (90)	Monona	82	410.0 (03)	
	Adams	21	236.0 (73)	Monroe	52	297.1 (31)	
	Audubon	36	305.1 (28)	Osceola	39	253.2 (59)	
	Clarke	89	363.3 (14)	Palo Alto	52	231.1 (76)	
	Davis	30	123.0 (98)	Pocahontas	30	209.8 (85)	
	Decatur	55	305.6 (26)	Ringgold	34	290.6 (34)	
	Fremont	49	293.4 (33)	Taylor	29	214.8 (79)	
	Howard	48	227.5 (78)	Van Buren	34	201.2 (87)	
	Ida	46	273.8 (45)	Wayne	37	235.7 (74)	
	Lucas	64	307.7 (25)	Worth	39	254.9 (57)	
				<b>Total</b>	895	262.2	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	76	213.5 (82)	Hardin	112	277.9 (44)
		Appanoose	97	288.7 (37)	Humboldt	58	269.8 (50)
Butler		75	236.6 (72)	Iowa	79	210.1 (84)	
Calhoun		50	270.3 (49)	Jefferson	77	261.0 (54)	
Cass		91	305.4 (27)	Keokuk	72	265.7 (52)	
Cedar		92	237.1 (71)	Kossuth	80	243.2 (69)	
Cherokee		76	330.4 (21)	Louisa	116	341.2 (18)	
Chickasaw		74	260.6 (55)	Lyon	29	90.3 (99)	
Clay		145	351.9 (16)	Mitchell	60	243.9 (68)	
Clayton		106	271.8 (47)	Montgomery	67	263.8 (53)	
Crawford		152	332.6 (19)	O'Brien	79	241.6 (70)	
Delaware		107	250.0 (62)	Page	134	397.6 (06)	
Dickinson		93	278.4 (43)	Poweshiek	111	287.6 (39)	
Emmet		93	331.0 (20)	Sac	51	252.5 (60)	
Floyd		91	254.9 (57)	Shelby	58	207.1 (86)	
Franklin		72	298.8 (30)	Tama	163	355.1 (15)	
Greene		51	250.0 (62)	Union	89	315.6 (23)	
Hamilton		109	302.8 (29)	Winnebago	59	265.8 (51)	
Hancock		51	233.9 (75)	Wright	112	327.5 (22)	
			<b>Total</b>	3,307	276.4		
Counties with 2004 Population > 20,000	Boone	151	247.5 (64)	Lee	320	401.5 (05)	
	Buchanan	138	229.2 (77)	Mahaska	154	290.0 (36)	
	Buena Vista	146	288.5 (38)	Marion	154	189.0 (89)	
	Carroll	124	245.1 (67)	Marshall	405	364.5 (12)	
	Cerro Gordo	340	341.4 (17)	Muscatine	464	373.0 (11)	
	Clinton	409	364.5 (13)	Plymouth	149	245.1 (66)	
	Des Moines	418	420.9 (02)	Sioux	122	132.5 (97)	
	Fayette	139	313.1 (24)	Wapello	362	386.8 (10)	
	Henry	112	258.1 (56)	Webster	416	438.8 (01)	
	Jackson	128	296.3 (32)	Winneshiek	65	172.9 (94)	
	Jasper	245	273.1 (46)	<b>Total</b>	4,961	313.4	
	MSA Counties	Benton	135	212.3 (83)	Linn	1,577	286.5 (40)
Black Hawk		1,232	391.2 (09)	Madison	75	186.6 (91)	
Bremer		94	189.1 (88)	Mills	93	280.1 (42)	
Dallas		257	214.7 (80)	Polk	3,633	290.4 (35)	
Dubuque		646	271.2 (48)	Pottawattamie	957	392.7 (08)	
Grundy		42	172.1 (95)	Scott	1,775	393.7 (07)	
Guthrie		74	247.5 (65)	Story	274	149.4 (96)	
Harrison		87	250.7 (61)	Warren	211	214.2 (81)	
Johnson		536	181.3 (93)	Washington	115	184.6 (92)	
Jones		121	282.7 (41)	Woodbury	1,307	406.4 (04)	
				<b>Total</b>	13,241	297.6	
<b>State Total</b>		22,404	296.0				

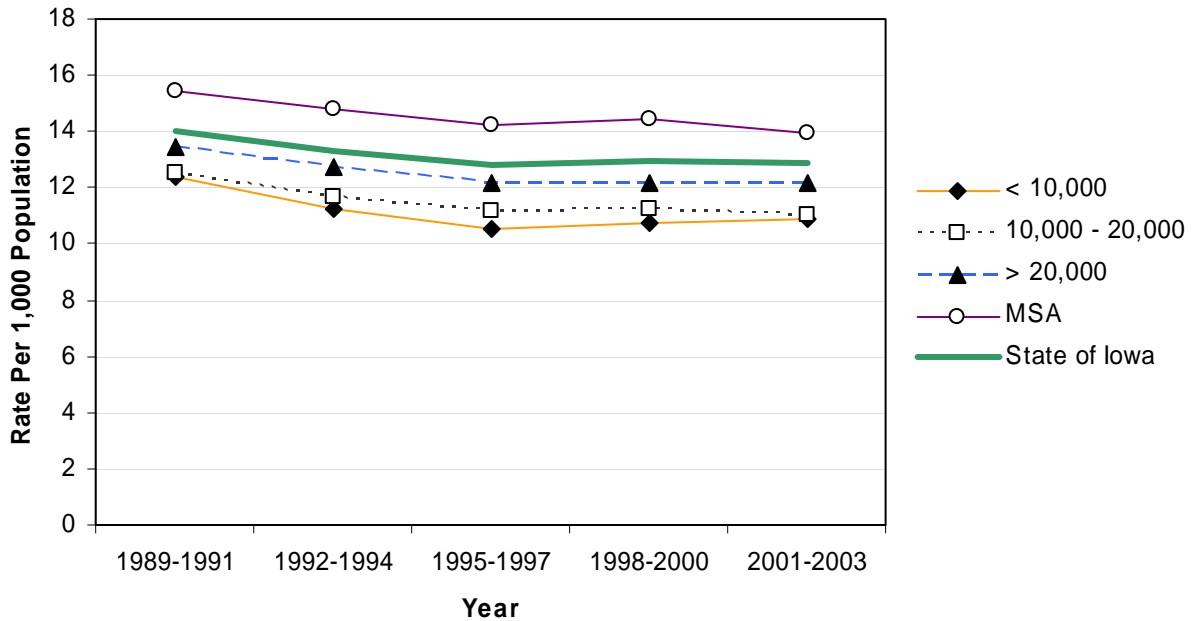
<sup>1</sup>Rates per 1,000 live births

<sup>2</sup>Rank among 99 Iowa counties

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

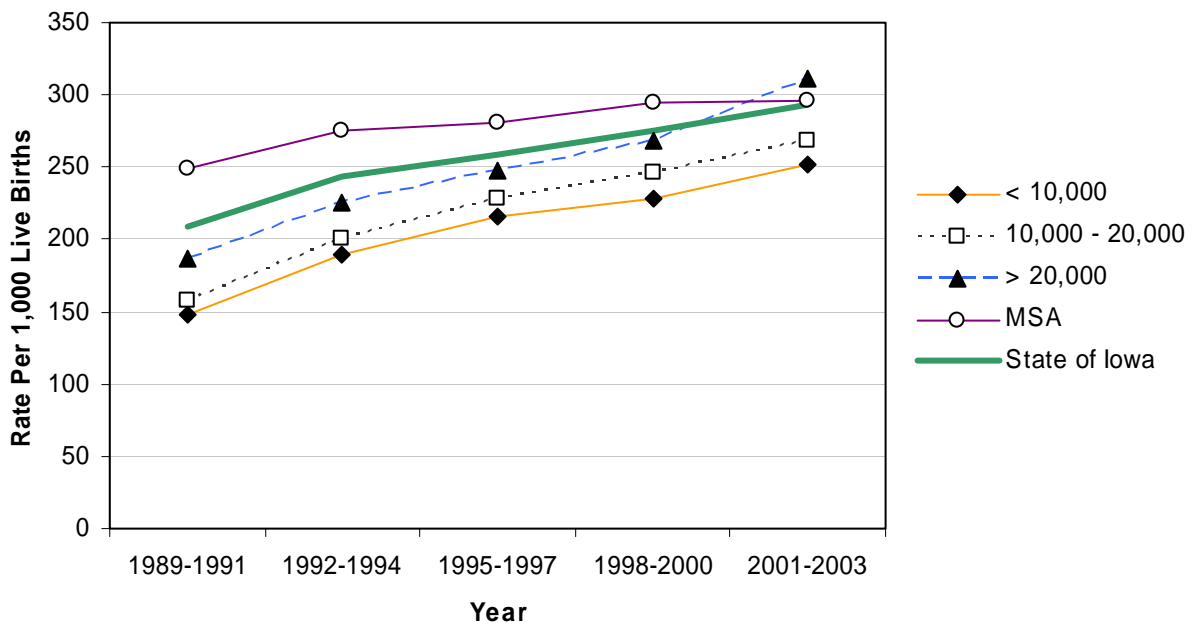
## Live Births by County Group 1989-2003

Crude Rates



## Out-of-Wedlock Births by County Group 1989-2003

Crude Rates



## Mothers Under Age 20 2002-2003

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with 2004 Population < 10,000	Adair	10	64.5 (83)	Monona	28	140.0 (05)	
	Adams	7	78.7 (62)	Monroe	18	102.9 (34)	
	Audubon	13	110.2 (20)	Osceola	14	90.9 (50)	
	Clarke	38	155.1 (02)	Palo Alto	9	40.0 (95)	
	Davis	12	49.2 (90)	Pocahontas	13	90.9 (50)	
	Decatur	21	116.7 (16)	Ringgold	19	162.4 (01)	
	Fremont	14	83.8 (59)	Taylor	7	51.9 (89)	
	Howard	18	85.3 (56)	Van Buren	13	76.9 (66)	
	Ida	17	101.2 (38)	Wayne	23	146.5 (03)	
	Lucas	22	105.8 (28)	Worth	17	111.1 (18)	
				<b>Total</b>	333	97.6	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	39	109.6 (21)	Hardin	38	94.3 (46)
		Appanoose	34	101.2 (38)	Humboldt	22	102.3 (36)
Butler		22	69.4 (78)	Iowa	22	58.5 (87)	
Calhoun		14	75.7 (67)	Jefferson	23	78.0 (63)	
Cass		33	110.7 (19)	Keokuk	25	92.3 (47)	
Cedar		17	43.8 (94)	Kossuth	23	69.9 (76)	
Cherokee		21	91.3 (49)	Louisa	37	108.8 (22)	
Chickasaw		21	73.9 (70)	Lyon	11	34.3 (97)	
Clay		34	82.5 (60)	Mitchell	19	77.2 (64)	
Clayton		34	87.2 (53)	Montgomery	25	98.4 (42)	
Crawford		48	105.0 (31)	O'Brien	31	94.8 (45)	
Delaware		36	84.1 (58)	Page	42	124.6 (12)	
Dickinson		23	68.9 (79)	Poweshiek	31	80.3 (61)	
Emmet		29	103.2 (33)	Sac	20	99.0 (41)	
Floyd		27	75.6 (68)	Shelby	20	71.4 (74)	
Franklin		31	128.6 (09)	Tama	49	106.8 (27)	
Greene		22	107.8 (25)	Union	36	127.7 (10)	
Hamilton		35	97.2 (44)	Winnebago	19	85.6 (55)	
Hancock		23	105.5 (29)	Wright	35	102.3 (35)	
			<b>Total</b>	1,071	89.5		
Counties with 2004 Population > 20,000	Boone	47	77.0 (65)	Lee	92	115.4 (17)	
	Buchanan	44	73.1 (71)	Mahaska	56	105.5 (30)	
	Buena Vista	55	108.7 (23)	Marion	54	66.3 (82)	
	Carroll	31	61.3 (86)	Marshall	148	133.2 (07)	
	Cerro Gordo	100	100.4 (40)	Muscatine	148	119.0 (15)	
	Clinton	150	133.7 (06)	Plymouth	41	67.4 (81)	
	Des Moines	123	123.9 (13)	Sioux	58	63.0 (85)	
	Fayette	46	103.6 (32)	Wapello	132	141.0 (04)	
	Henry	40	92.2 (48)	Webster	122	128.7 (08)	
	Jackson	31	71.8 (73)	Winneshiek	18	47.9 (92)	
	Jasper	91	101.4 (37)	<b>Total</b>	1,627	102.8	
	MSA Counties	Benton	29	45.6 (93)	Linn	383	69.6 (77)
Black Hawk		342	108.6 (24)	Madison	29	72.1 (72)	
Bremer		17	34.2 (98)	Mills	28	84.3 (57)	
Dallas		58	48.5 (91)	Polk	1,102	88.1 (52)	
Dubuque		164	68.8 (80)	Pottawattamie	306	125.6 (11)	
Grundy		14	57.4 (88)	Scott	482	106.9 (26)	
Guthrie		26	87.0 (54)	Story	51	27.8 (99)	
Harrison		22	63.4 (84)	Warren	73	74.1 (69)	
Johnson		114	38.6 (96)	Washington	44	70.6 (75)	
Jones		42	98.1 (43)	Woodbury	389	121.0 (14)	
				<b>Total</b>	3,715	83.5	
<b>State Total</b>		6,746	89.1				

<sup>1</sup>Rates per 1,000 live births

<sup>2</sup>Rank among 99 Iowa counties

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

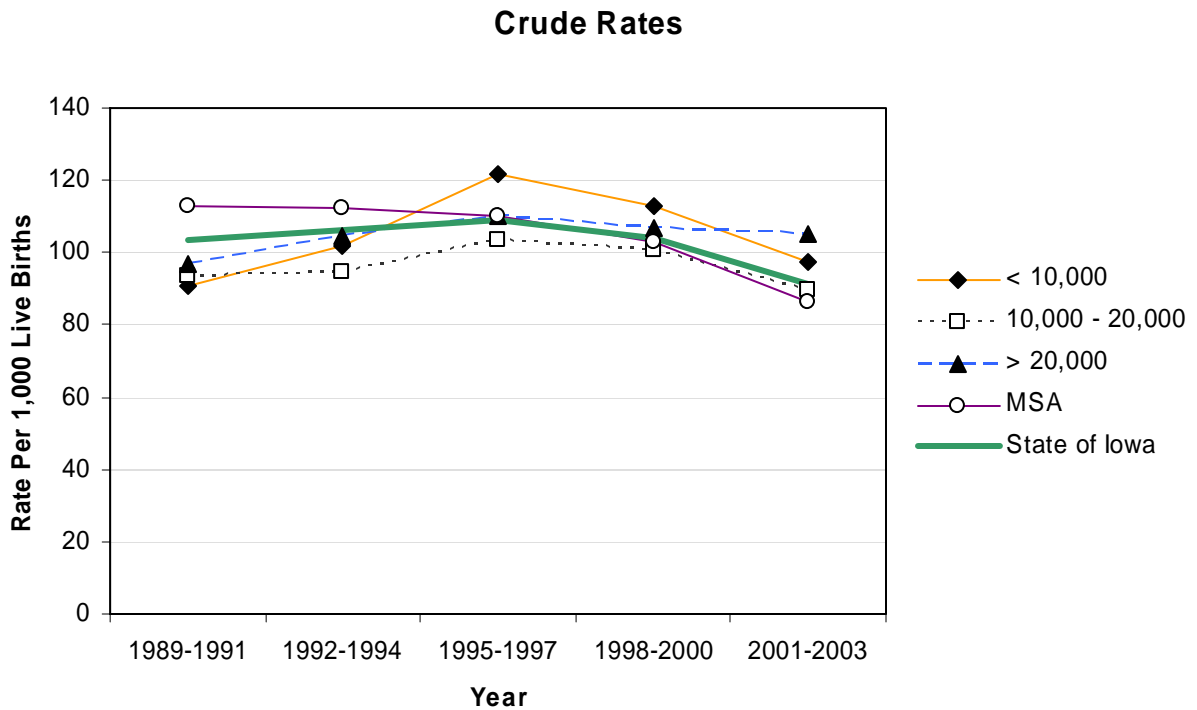
## Low Birth Weight (<2500 Grams) 2002-2003

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	17	85.0	
	Adams	9	101.1	Monroe	14	80.0	
	Audubon	*	*	Osceola	*	*	
	Clarke	10	40.8	Palo Alto	17	75.6	
	Davis	15	61.5	Pocahontas	9	62.9	
	Decatur	8	44.4	Ringgold	9	76.9	
	Fremont	6	35.9	Taylor	*	*	
	Howard	8	37.9	Van Buren	6	35.5	
	Ida	19	113.1	Wayne	16	101.9	
	Lucas	12	57.7	Worth	6	39.2	
				<b>Total</b>	194	56.8	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	13	36.5	Hardin	25	62.0
		Appanoose	28	83.3	Humboldt	12	55.8
Butler		18	56.8	Iowa	31	82.4	
Calhoun		8	43.2	Jefferson	17	57.6	
Cass		21	70.5	Keokuk	10	36.9	
Cedar		31	79.9	Kossuth	17	51.7	
Cherokee		18	78.3	Louisa	18	52.9	
Chickasaw		14	49.3	Lyon	19	59.2	
Clay		36	87.4	Mitchell	17	69.1	
Clayton		15	38.5	Montgomery	22	86.6	
Crawford		33	72.2	O'Brien	11	33.6	
Delaware		18	42.1	Page	37	109.8	
Dickinson		28	83.8	Poweshiek	19	49.2	
Emmet		17	60.5	Sac	10	49.5	
Floyd		25	70.0	Shelby	23	82.1	
Franklin		16	66.4	Tama	38	82.8	
Greene		13	63.7	Union	24	85.1	
Hamilton		21	58.3	Winnebago	11	49.5	
Hancock	16	73.4	Wright	21	61.4		
			<b>Total</b>	771	64.4		
Counties with 2004 Population > 20,000	Boone	42	68.9	Lee	57	71.5	
	Buchanan	47	78.1	Mahaska	23	43.3	
	Buena Vista	32	63.2	Marion	53	65.0	
	Carroll	34	67.2	Marshall	79	71.1	
	Cerro Gordo	57	57.2	Muscatine	74	59.5	
	Clinton	96	85.6	Plymouth	44	72.4	
	Des Moines	70	70.5	Sioux	46	49.9	
	Fayette	21	47.3	Wapello	69	73.7	
	Henry	25	57.6	Webster	55	58.0	
	Jackson	26	60.2	Winneshiek	22	58.5	
	Jasper	70	78.0	<b>Total</b>	1,042	65.8	
MSA Counties	Benton	38	59.7	Linn	349	63.4	
	Black Hawk	227	72.1	Madison	24	59.7	
	Bremer	29	58.4	Mills	20	60.2	
	Dallas	76	63.5	Polk	865	69.1	
	Dubuque	133	55.8	Pottawattamie	224	91.9	
	Grundy	7	28.7	Scott	349	77.4	
	Guthrie	27	90.3	Story	93	50.7	
	Harrison	34	98.0	Warren	50	50.8	
	Johnson	155	52.4	Washington	34	54.6	
	Jones	32	74.8	Woodbury	240	74.6	
				<b>Total</b>	3,006	67.6	
<b>State Total</b>		5,013	66.2				

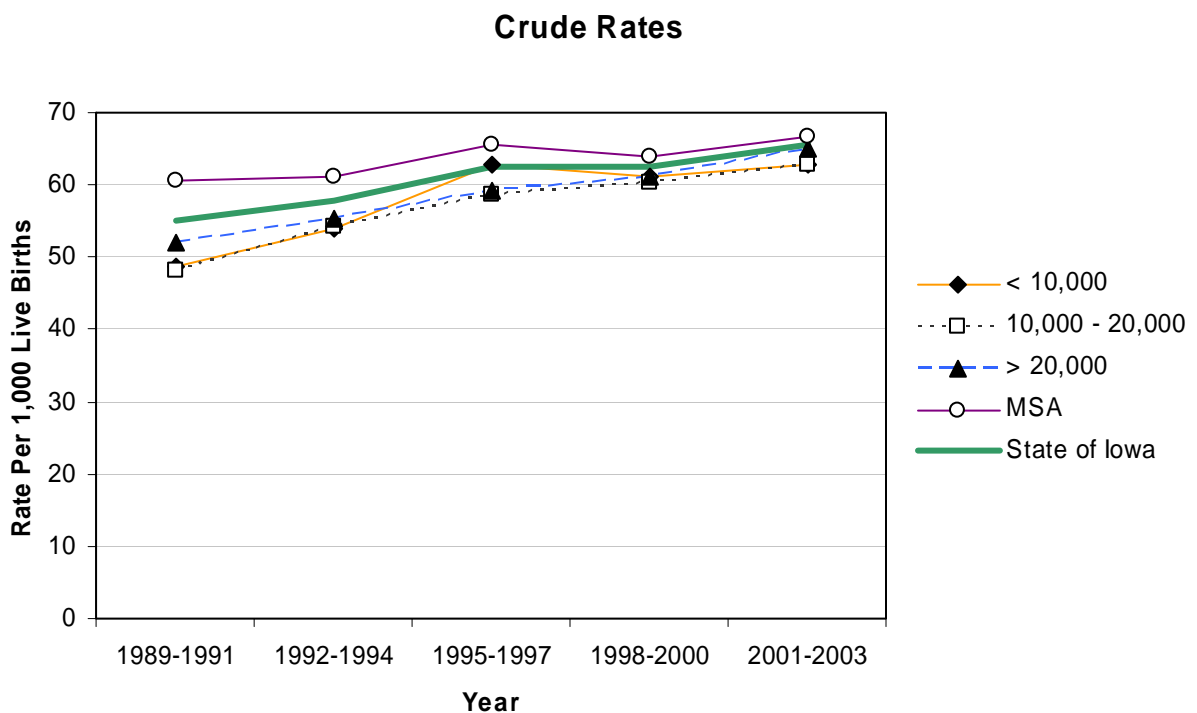
<sup>1</sup>Rates per 1,000 live births

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

## Mothers Under Age 20 by County Group 1989-2003



## Low Birth Weight (<2500 grams) by County Group 1989-2003



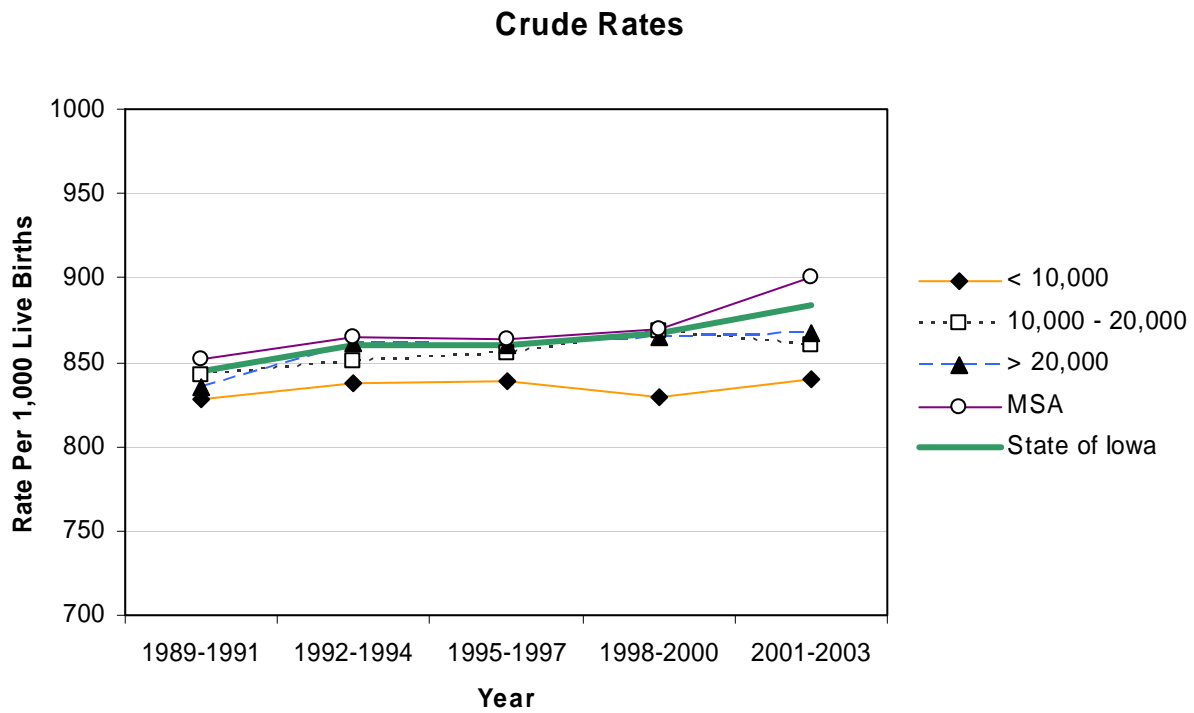
# Mothers Who Began Prenatal Care in the First Trimester 2002-2003

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with 2004 Population < 10,000	Adair	132	851.6 (65)	Monona	179	895.0 (40)	
	Adams	83	932.6 (12)	Monroe	157	897.1 (37)	
	Audubon	104	881.4 (47)	Osceola	133	863.6 (59)	
	Clarke	203	828.6 (81)	Palo Alto	206	915.6 (21)	
	Davis	157	643.4 (99)	Pocahontas	123	860.1 (60)	
	Decatur	141	783.3 (90)	Ringgold	97	829.1 (80)	
	Fremont	145	868.3 (57)	Taylor	111	822.2 (85)	
	Howard	174	824.6 (82)	Van Buren	128	757.4 (96)	
	Ida	157	934.5 (08)	Wayne	132	840.8 (76)	
	Lucas	173	831.7 (79)	Worth	129	843.1 (74)	
				<b>Total</b>	2,864	839.1	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	298	837.1 (78)	Hardin	358	888.3 (45)
		Appanoose	300	892.9 (42)	Humboldt	183	851.2 (66)
Butler		289	911.7 (25)	Iowa	352	936.2 (07)	
Calhoun		162	875.7 (54)	Jefferson	228	772.9 (92)	
Cass		262	879.2 (49)	Keokuk	245	904.1 (29)	
Cedar		358	922.7 (17)	Kossuth	295	896.7 (38)	
Cherokee		210	913.0 (24)	Louisa	300	882.4 (46)	
Chickasaw		242	852.1 (64)	Lyon	274	853.6 (62)	
Clay		357	866.5 (58)	Mitchell	175	711.4 (98)	
Clayton		333	853.8 (61)	Montgomery	223	878.0 (50)	
Crawford		358	783.4 (89)	O'Brien	287	877.7 (51)	
Delaware		386	901.9 (33)	Page	310	919.9 (19)	
Dickinson		304	910.2 (26)	Poweshiek	356	922.3 (18)	
Emmet		215	765.1 (93)	Sac	180	891.1 (44)	
Floyd		269	753.5 (97)	Shelby	252	900.0 (34)	
Franklin		183	759.3 (95)	Tama	376	819.2 (86)	
Greene		178	872.5 (55)	Union	239	847.5 (69)	
Hamilton		323	897.2 (36)	Winnebago	188	846.8 (72)	
Hancock	185	848.6 (68)	Wright	277	809.9 (88)		
			<b>Total</b>	10,310	861.8		
Counties with 2004 Population > 20,000	Boone	563	923.0 (16)	Lee	699	877.0 (52)	
	Buchanan	496	823.9 (84)	Mahaska	475	894.5 (41)	
	Buena Vista	394	778.7 (91)	Marion	745	914.1 (23)	
	Carroll	472	932.8 (11)	Marshall	847	762.4 (94)	
	Cerro Gordo	834	837.3 (77)	Muscatine	1,110	892.3 (43)	
	Clinton	976	869.9 (56)	Plymouth	575	945.7 (04)	
	Des Moines	836	841.9 (75)	Sioux	834	905.5 (28)	
	Fayette	398	896.4 (39)	Wapello	766	818.4 (87)	
	Henry	395	910.1 (27)	Webster	803	847.0 (71)	
	Jackson	388	898.1 (35)	Winneshiek	310	824.5 (83)	
	Jasper	809	901.9 (32)	<b>Total</b>	13,725	867.1	
	MSA Counties	Benton	598	940.3 (05)	Linn	5,122	930.4 (14)
Black Hawk		2,917	926.3 (15)	Madison	387	962.7 (02)	
Bremer		479	963.8 (01)	Mills	291	876.5 (53)	
Dallas		1,095	914.8 (22)	Polk	11,293	902.6 (31)	
Dubuque		2,151	903.0 (30)	Pottawattamie	2,059	844.9 (73)	
Grundy		232	950.8 (03)	Scott	3,834	850.5 (67)	
Guthrie		275	919.7 (20)	Story	1,711	932.9 (10)	
Harrison		296	853.0 (63)	Warren	924	938.1 (06)	
Johnson		2,760	933.4 (09)	Washington	528	847.5 (70)	
Jones		399	932.2 (13)	Woodbury	2,832	880.6 (48)	
				<b>Total</b>	40,183	903.2	
<b>State Total</b>	67,082	886.2					

<sup>1</sup>Rates per 1,000 live births  
<sup>2</sup>Rank among 99 Iowa counties

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

## Mothers Who Began Prenatal Care in the First Trimester by County Group 1989-2003



## Mothers Who Smoked During Pregnancy 2002-2003

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with 2004 Population < 10,000	Adair	31	200.0 (26)	Monona	48	240.0 (14)	
	Adams	23	258.4 (07)	Monroe	36	205.7 (25)	
	Audubon	18	152.5 (65)	Osceola	21	136.4 (78)	
	Clarke	68	277.6 (02)	Palo Alto	39	173.3 (47)	
	Davis	13	53.3 (99)	Pocahontas	40	279.7 (01)	
	Decatur	43	238.9 (16)	Ringgold	23	196.6 (29)	
	Fremont	42	251.5 (09)	Taylor	25	185.2 (35)	
	Howard	23	109.0 (87)	Van Buren	26	153.8 (63)	
	Ida	43	256.0 (08)	Wayne	33	210.2 (24)	
	Lucas	56	269.2 (03)	Worth	18	117.6 (83)	
				<b>Total</b>	669	196	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	54	151.7 (66)	Hardin	71	176.2 (44)
		Appanoose	81	241.1 (13)	Humboldt	32	148.8 (69)
Butler		55	173.5 (46)	Iowa	44	117.0 (84)	
Calhoun		25	135.1 (79)	Jefferson	32	108.5 (88)	
Cass		72	241.6 (12)	Keokuk	51	188.2 (34)	
Cedar		57	146.9 (70)	Kossuth	45	136.8 (77)	
Cherokee		55	239.1 (15)	Louisa	51	150.0 (68)	
Chickasaw		52	183.1 (37)	Lyon	33	102.8 (91)	
Clay		80	194.2 (31)	Mitchell	25	101.6 (92)	
Clayton		59	151.3 (67)	Montgomery	47	185.0 (36)	
Crawford		82	179.4 (42)	O'Brien	54	165.1 (57)	
Delaware		77	179.9 (40)	Page	89	264.1 (06)	
Dickinson		51	152.7 (64)	Poweshiek	76	196.9 (28)	
Emmet		63	224.2 (20)	Sac	28	138.6 (75)	
Floyd		50	140.1 (72)	Shelby	46	164.3 (58)	
Franklin		32	132.8 (80)	Tama	78	169.9 (53)	
Greene		46	225.5 (19)	Union	61	216.3 (22)	
Hamilton	60	166.7 (55)	Winnebago	38	171.2 (50)		
Hancock	37	169.7 (54)	Wright	67	195.9 (30)		
			<b>Total</b>	2,056	171.9		
Counties with 2004 Population > 20,000	Boone	111	182.0 (38)	Lee	190	238.4 (17)	
	Buchanan	84	139.5 (73)	Mahaska	121	227.9 (18)	
	Buena Vista	39	77.1 (95)	Marion	148	181.6 (39)	
	Carroll	36	71.1 (96)	Marshall	179	161.1 (59)	
	Cerro Gordo	178	178.7 (43)	Muscatine	215	172.8 (48)	
	Clinton	272	242.4 (11)	Plymouth	80	131.6 (81)	
	Des Moines	247	248.7 (10)	Sioux	60	65.1 (97)	
	Fayette	85	191.4 (33)	Wapello	155	165.6 (56)	
	Henry	74	170.5 (52)	Webster	253	266.9 (04)	
	Jackson	76	175.9 (45)	Winneshiek	40	106.4 (90)	
	Jasper	179	199.6 (27)	<b>Total</b>	2,822	178.3	
MSA Counties	Benton	91	143.1 (71)	Linn	883	160.4 (60)	
	Black Hawk	540	171.5 (49)	Madison	62	154.2 (62)	
	Bremer	55	110.7 (86)	Mills	70	210.8 (23)	
	Dallas	129	107.8 (89)	Polk	1,744	139.4 (74)	
	Dubuque	302	126.8 (82)	Pottawattamie	649	266.3 (05)	
	Grundy	28	114.8 (85)	Scott	872	193.4 (32)	
	Guthrie	51	170.6 (51)	Story	142	77.4 (94)	
	Harrison	76	219.0 (21)	Warren	136	138.1 (76)	
	Johnson	169	57.2 (98)	Washington	61	97.9 (93)	
	Jones	77	179.9 (40)	Woodbury	510	158.6 (61)	
			<b>Total</b>	6,647	149.4		
<b>State Total</b>		12,194	161.1				

<sup>1</sup>Rates per 1,000 live births  
<sup>2</sup>Rank among 99 Iowa counties

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

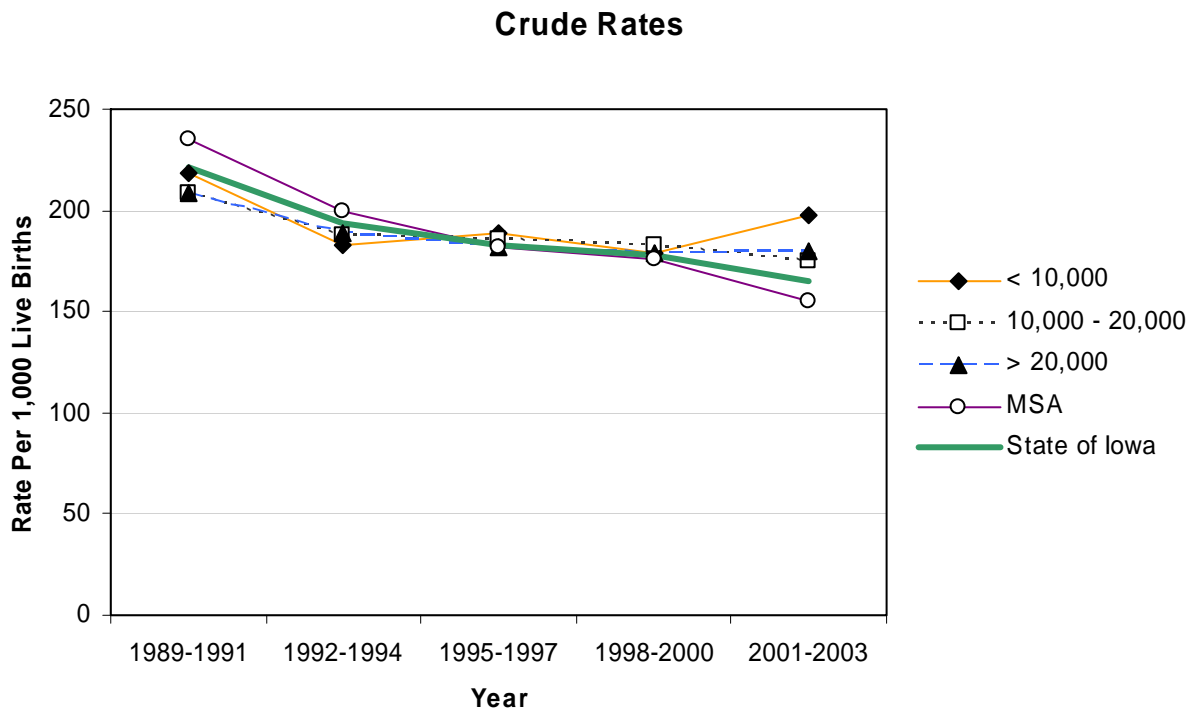
## Mothers Who Drank During Pregnancy 2002-2003

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	*	*	
	Adams	*	*	Monroe	*	*	
	Audubon	*	*	Osceola	*	*	
	Clarke	*	*	Palo Alto	*	*	
	Davis	*	*	Pocahontas	*	*	
	Decatur	*	*	Ringgold	*	*	
	Fremont	*	*	Taylor	*	*	
	Howard	*	*	Van Buren	*	*	
	Ida	*	*	Wayne	*	*	
	Lucas	*	*	Worth	*	*	
				<b>Total</b>	26	7.6	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
		Appanoose	5	14.9	Humboldt	*	*
Butler		*	*	Iowa	*	*	
Calhoun		*	*	Jefferson	*	*	
Cass		*	*	Keokuk	*	*	
Cedar		*	*	Kossuth	*	*	
Cherokee		*	*	Louisa	*	*	
Chickasaw		*	*	Lyon	*	*	
Clay		*	*	Mitchell	*	*	
Clayton		*	*	Montgomery	*	*	
Crawford		*	*	O'Brien	*	*	
Delaware		5	11.7	Page	6	17.8	
Dickinson		*	*	Poweshiek	5	13.0	
Emmet		*	*	Sac	*	*	
Floyd		*	*	Shelby	*	*	
Franklin		*	*	Tama	6	13.1	
Greene		*	*	Union	*	*	
Hamilton		*	*	Winnebago	*	*	
Hancock		*	*	Wright	8	23.4	
			<b>Total</b>	87	7.3		
Counties with 2004 Population > 20,000	Boone	*	*	Lee	9	11.3	
	Buchanan	7	11.6	Mahaska	*	*	
	Buena Vista	*	*	Marion	5	6.1	
	Carroll	*	*	Marshall	7	6.3	
	Cerro Gordo	*	*	Muscatine	8	6.4	
	Clinton	6	5.3	Plymouth	*	*	
	Des Moines	9	9.1	Sioux	6	6.5	
	Fayette	*	*	Wapello	5	5.3	
	Henry	*	*	Webster	10	10.5	
	Jackson	*	*	Winneshiek	6	16.0	
	Jasper	*	*	<b>Total</b>	110	6.9	
	MSA Counties	Benton	12	18.9	Linn	79	14.4
Black Hawk		20	6.4	Madison	*	*	
Bremer		*	*	Mills	*	*	
Dallas		10	8.4	Polk	111	8.9	
Dubuque		16	6.7	Pottawattamie	23	9.4	
Grundy		*	*	Scott	40	8.9	
Guthrie		*	*	Story	17	9.3	
Harrison		6	17.3	Warren	8	8.1	
Johnson		24	8.1	Washington	5	8.0	
Jones		*	*	Woodbury	13	4.0	
				<b>Total</b>	391	8.8	
<b>State Total</b>	614	8.1					

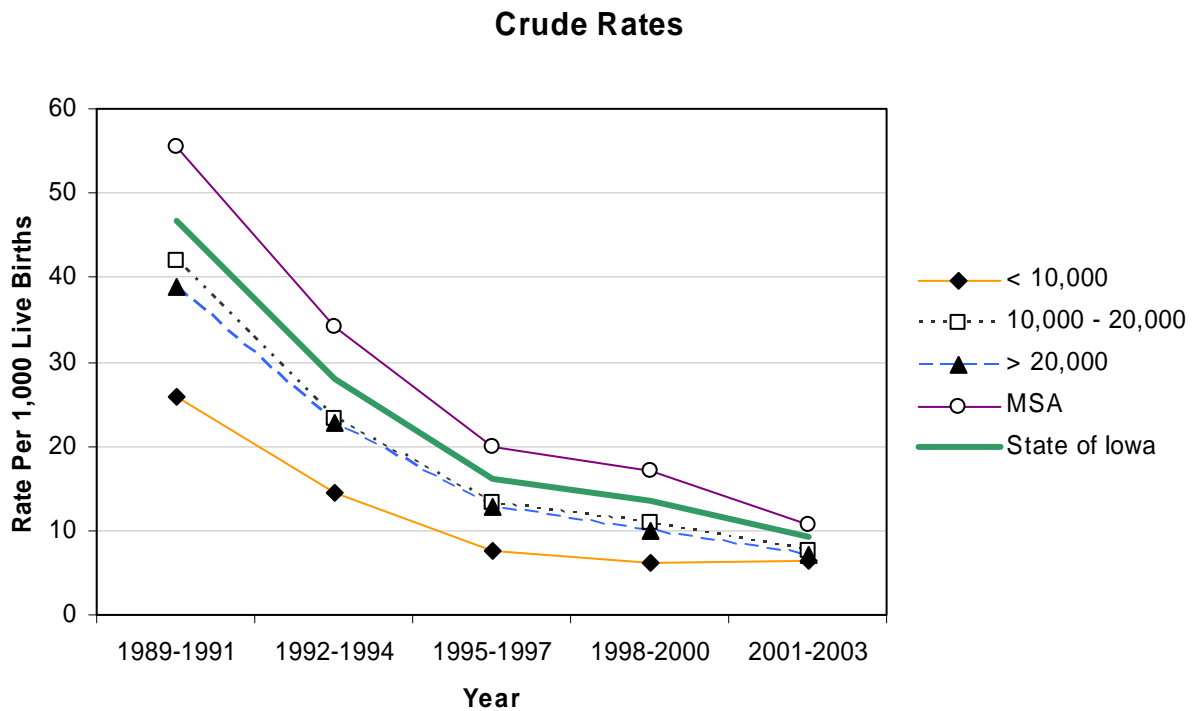
<sup>1</sup>Rates per 1,000 live births

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

## Mothers Who Smoked During Pregnancy by County Group 1989-2003



## Mothers Who Drank During Pregnancy by County Group 1989-2003



## Fetal Deaths 2002-2003

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	*	*	
	Adams	*	*	Monroe	*	*	
	Audubon	*	*	Osceola	*	*	
	Clarke	*	*	Palo Alto	*	*	
	Davis	*	*	Pocahontas	*	*	
	Decatur	*	*	Ringgold	*	*	
	Fremont	*	*	Taylor	*	*	
	Howard	*	*	Van Buren	*	*	
	Ida	*	*	Wayne	*	*	
	Lucas	*	*	Worth	*	*	
				<b>Total</b>	19	5.6	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
		Appanoose	*	*	Humboldt	*	*
Butler		*	*	Iowa	*	*	
Calhoun		*	*	Jefferson	*	*	
Cass		*	*	Keokuk	*	*	
Cedar		*	*	Kossuth	*	*	
Cherokee		*	*	Louisa	*	*	
Chickasaw		*	*	Lyon	*	*	
Clay		*	*	Mitchell	*	*	
Clayton		7	17.9	Montgomery	*	*	
Crawford		*	*	O'Brien	*	*	
Delaware		*	*	Page	*	*	
Dickinson		*	*	Poweshiek	*	*	
Emmet		*	*	Sac	*	*	
Floyd		*	*	Shelby	*	*	
Franklin		*	*	Tama	*	*	
Greene		*	*	Union	*	*	
Hamilton		*	*	Winnebago	*	*	
Hancock		*	*	Wright	*	*	
			<b>Total</b>	55	4.6		
Counties with 2004 Population > 20,000	Boone	*	*	Lee	6	7.5	
	Buchanan	8	13.3	Mahaska	6	11.3	
	Buena Vista	*	*	Marion	*	*	
	Carroll	*	*	Marshall	5	4.5	
	Cerro Gordo	5	5.0	Muscatine	*	*	
	Clinton	5	4.5	Plymouth	5	8.2	
	Des Moines	5	5.0	Sioux	*	*	
	Fayette	*	*	Wapello	*	*	
	Henry	*	*	Webster	7	7.4	
	Jackson	*	*	Winneshiek	*	*	
	Jasper	*	*	<b>Total</b>	74	4.7	
	MSA Counties	Benton	*	*	Linn	38	6.9
Black Hawk		20	6.4	Madison	*	*	
Bremer		*	*	Mills	*	*	
Dallas		8	6.7	Polk	59	4.7	
Dubuque		12	5.0	Pottawattamie	19	7.8	
Grundy		*	*	Scott	26	5.8	
Guthrie		*	*	Story	9	4.9	
Harrison		*	*	Warren	*	*	
Johnson		19	6.4	Washington	*	*	
Jones		*	*	Woodbury	21	6.5	
				<b>Total</b>	253	5.7	
<b>State Total</b>	401	5.3					

<sup>1</sup>Rates per 1,000 live births

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

## Neonatal Deaths 2002-2003

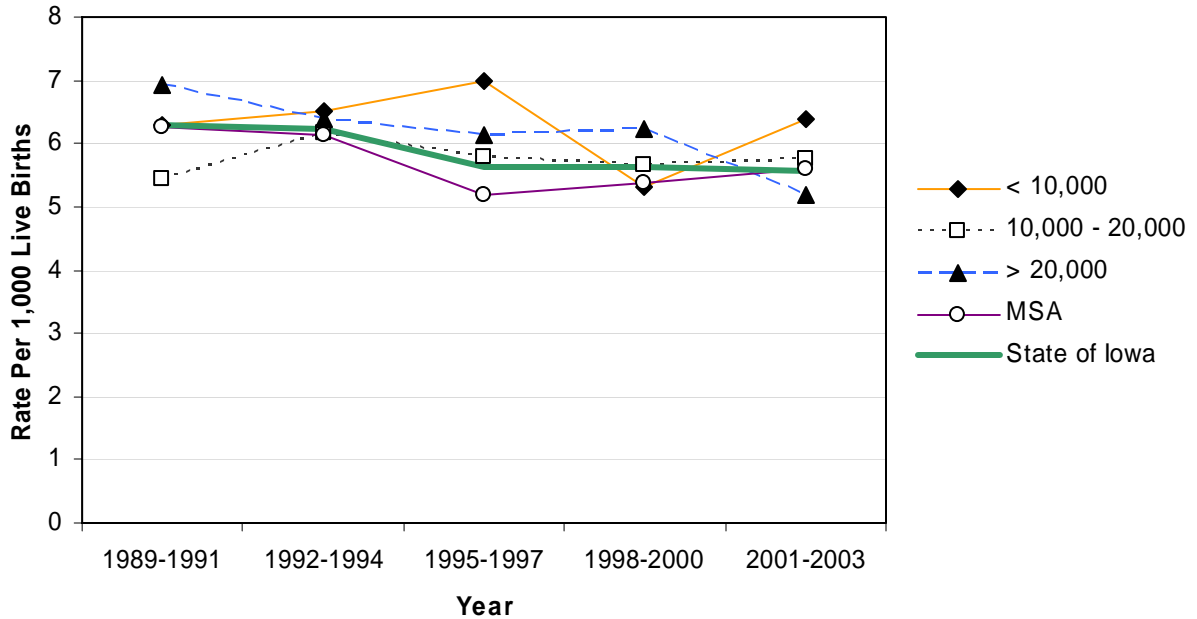
	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	*	*	
	Adams	*	*	Monroe	*	*	
	Audubon	*	*	Osceola	*	*	
	Clarke	*	*	Palo Alto	*	*	
	Davis	*	*	Pocahontas	*	*	
	Decatur	*	*	Ringgold	*	*	
	Fremont	*	*	Taylor	*	*	
	Howard	*	*	Van Buren	*	*	
	Ida	*	*	Wayne	*	*	
	Lucas	*	*	Worth	*	*	
				<b>Total</b>	12	3.5	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
		Appanoose	*	*	Humboldt	*	*
Butler		*	*	Iowa	*	*	
Calhoun		*	*	Jefferson	*	*	
Cass		*	*	Keokuk	*	*	
Cedar		*	*	Kossuth	*	*	
Cherokee		*	*	Louisa	*	*	
Chickasaw		*	*	Lyon	*	*	
Clay		*	*	Mitchell	*	*	
Clayton		*	*	Montgomery	*	*	
Crawford		*	*	O'Brien	*	*	
Delaware		5	11.7	Page	*	*	
Dickinson		*	*	Poweshiek	*	*	
Emmet		*	*	Sac	*	*	
Floyd		*	*	Shelby	*	*	
Franklin		*	*	Tama	*	*	
Greene		*	*	Union	*	*	
Hamilton		*	*	Winnebago	*	*	
Hancock	*	*	Wright	*	*		
			<b>Total</b>	41	3.4		
Counties with 2004 Population > 20,000	Boone	*	*	Lee	*	*	
	Buchanan	*	*	Mahaska	*	*	
	Buena Vista	*	*	Marion	*	*	
	Carroll	*	*	Marshall	*	*	
	Cerro Gordo	5	5.0	Muscatine	*	*	
	Clinton	7	6.2	Plymouth	*	*	
	Des Moines	*	*	Sioux	*	*	
	Fayette	*	*	Wapello	*	*	
	Henry	*	*	Webster	*	*	
	Jackson	*	*	Winneshiek	*	*	
	Jasper	*	*	<b>Total</b>	58	3.7	
	MSA Counties	Benton	*	*	Linn	22	4.0
Black Hawk		10	3.2	Madison	*	*	
Bremer		*	*	Mills	*	*	
Dallas		6	5.0	Polk	45	3.6	
Dubuque		7	2.9	Pottawattamie	12	4.9	
Grundy		*	*	Scott	12	2.7	
Guthrie		*	*	Story	5	2.7	
Harrison		*	*	Warren	5	5.1	
Johnson		8	2.7	Washington	5	8.0	
Jones		*	*	Woodbury	9	2.8	
				<b>Total</b>	157	3.5	
<b>State Total</b>	268	3.5					

<sup>1</sup>Rates per 1,000 live births

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

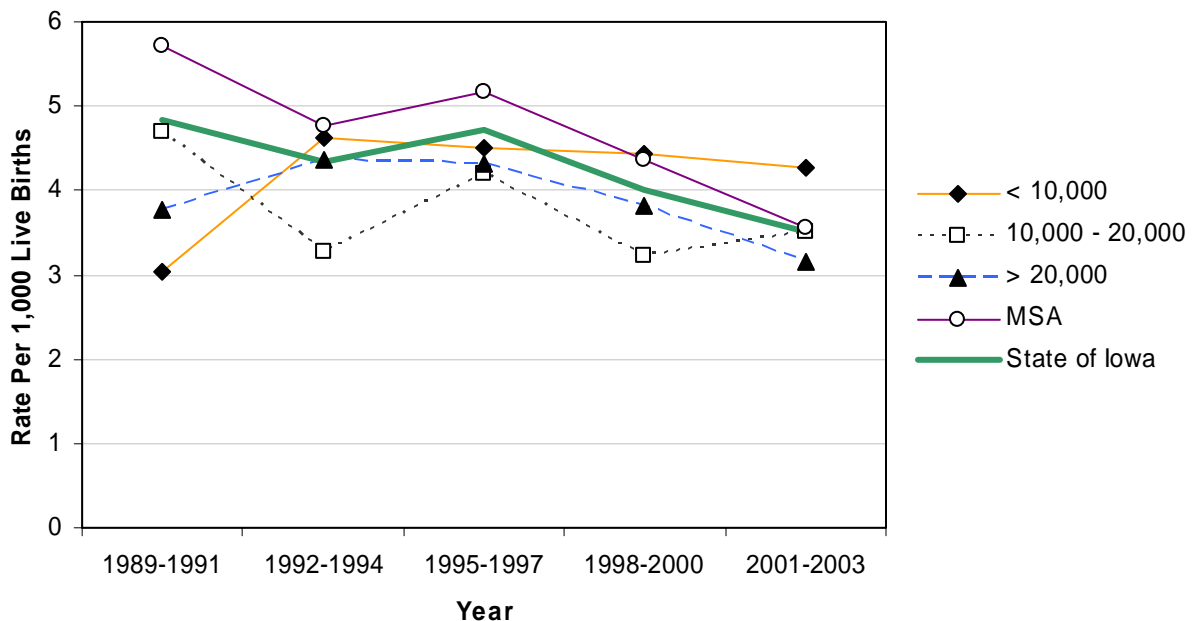
## Fetal Deaths by County Group 1989-2003

Crude Rates



## Neonatal Deaths by County Group 1989-2003

Crude Rates



## Perinatal Deaths 2002-2003

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	*	*	
	Adams	*	*	Monroe	*	*	
	Audubon	*	*	Osceola	*	*	
	Clarke	*	*	Palo Alto	*	*	
	Davis	*	*	Pocahontas	*	*	
	Decatur	*	*	Ringgold	*	*	
	Fremont	*	*	Taylor	*	*	
	Howard	*	*	Van Buren	*	*	
	Ida	*	*	Wayne	*	*	
	Lucas	*	*	Worth	*	*	
				<b>Total</b>	31	9.1	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
		Appanoose	*	*	Humboldt	*	*
Butler		*	*	Iowa	*	*	
Calhoun		*	*	Jefferson	*	*	
Cass		*	*	Keokuk	*	*	
Cedar		*	*	Kossuth	*	*	
Cherokee		*	*	Louisa	*	*	
Chickasaw		*	*	Lyon	*	*	
Clay		*	*	Mitchell	*	*	
Clayton		8	20.5	Montgomery	*	*	
Crawford		*	*	O'Brien	*	*	
Delaware		7	16.4	Page	*	*	
Dickinson		*	*	Poweshiek	*	*	
Emmet		*	*	Sac	*	*	
Floyd		*	*	Shelby	*	*	
Franklin		*	*	Tama	5	10.9	
Greene		*	*	Union	*	*	
Hamilton		*	*	Winnebago	*	*	
Hancock	*	*	Wright	*	*		
			<b>Total</b>	96	8.0		
Counties with 2004 Population > 20,000	Boone	*	*	Lee	8	10.0	
	Buchanan	12	19.9	Mahaska	7	13.2	
	Buena Vista	6	11.9	Marion	8	9.8	
	Carroll	5	9.9	Marshall	5	4.5	
	Cerro Gordo	10	10.0	Muscatine	*	*	
	Clinton	12	10.7	Plymouth	6	9.9	
	Des Moines	8	8.1	Sioux	*	*	
	Fayette	5	11.3	Wapello	6	6.4	
	Henry	*	*	Webster	11	11.6	
	Jackson	6	13.9	Winneshiek	*	*	
	Jasper	*	*	<b>Total</b>	132	8.3	
	MSA Counties	Benton	*	*	Linn	60	10.9
Black Hawk		30	9.5	Madison	5	12.4	
Bremer		*	*	Mills	*	*	
Dallas		14	11.7	Polk	104	8.3	
Dubuque		19	8.0	Pottawattamie	31	12.7	
Grundy		*	*	Scott	38	8.4	
Guthrie		*	*	Story	14	7.6	
Harrison		*	*	Warren	7	7.1	
Johnson		27	9.1	Washington	8	12.8	
Jones		7	16.4	Woodbury	30	9.3	
				<b>Total</b>	410	9.2	
<b>State Total</b>		669	8.8				

<sup>1</sup>Rates per 1,000 live births

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

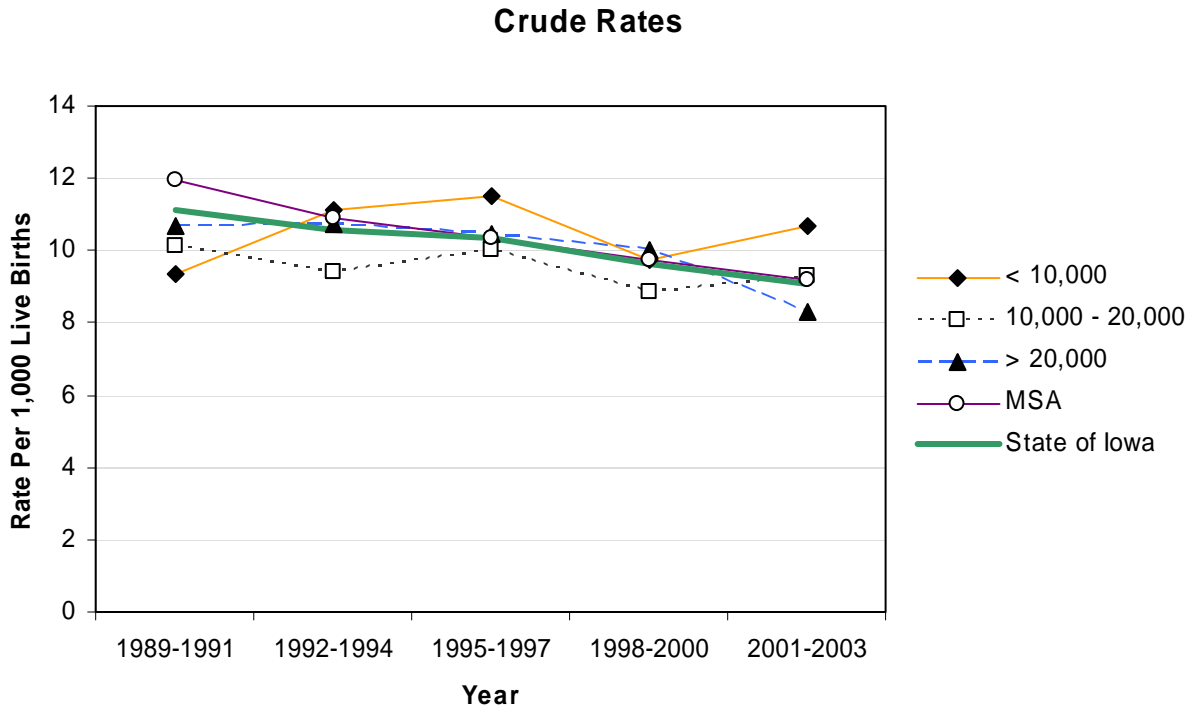
## Infant Deaths 2002-2003

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	*	*	
	Adams	*	*	Monroe	*	*	
	Audubon	*	*	Osceola	*	*	
	Clarke	*	*	Palo Alto	*	*	
	Davis	*	*	Pocahontas	*	*	
	Decatur	*	*	Ringgold	*	*	
	Fremont	*	*	Taylor	*	*	
	Howard	*	*	Van Buren	*	*	
	Ida	*	*	Wayne	*	*	
	Lucas	*	*	Worth	*	*	
				<b>Total</b>	<b>16</b>	<b>4.7</b>	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
		Appanoose	*	*	Humboldt	*	*
Butler		*	*	Iowa	*	*	
Calhoun		*	*	Jefferson	*	*	
Cass		*	*	Keokuk	*	*	
Cedar		*	*	Kossuth	*	*	
Cherokee		*	*	Louisa	*	*	
Chickasaw		*	*	Lyon	*	*	
Clay		*	*	Mitchell	*	*	
Clayton		*	*	Montgomery	*	*	
Crawford		*	*	O'Brien	*	*	
Delaware		6	14.0	Page	*	*	
Dickinson		5	15.0	Poweshiek	*	*	
Emmet		*	*	Sac	*	*	
Floyd		*	*	Shelby	*	*	
Franklin		*	*	Tama	*	*	
Greene		*	*	Union	*	*	
Hamilton		*	*	Winnebago	*	*	
Hancock		*	*	Wright	*	*	
			<b>Total</b>	<b>56</b>	<b>4.7</b>		
Counties with 2004 Population > 20,000	Boone	*	*	Lee	6	7.5	
	Buchanan	*	*	Mahaska	*	*	
	Buena Vista	*	*	Marion	*	*	
	Carroll	*	*	Marshall	5	4.5	
	Cerro Gordo	6	6.0	Muscatine	*	*	
	Clinton	8	7.1	Plymouth	*	*	
	Des Moines	8	8.1	Sioux	*	*	
	Fayette	*	*	Wapello	*	*	
	Henry	*	*	Webster	9	9.5	
	Jackson	*	*	Winneshiek	*	*	
	Jasper	6	6.7	<b>Total</b>	<b>93</b>	<b>5.9</b>	
	MSA Counties	Benton	*	*	Linn	30	5.4
Black Hawk		21	6.7	Madison	5	12.4	
Bremer		*	*	Mills	*	*	
Dallas		6	5.0	Polk	73	5.8	
Dubuque		11	4.6	Pottawattamie	19	7.8	
Grundy		*	*	Scott	25	5.5	
Guthrie		*	*	Story	6	3.3	
Harrison		*	*	Warren	5	5.1	
Johnson		8	2.7	Washington	8	12.8	
Jones		*	*	Woodbury	22	6.8	
				<b>Total</b>	<b>249</b>	<b>5.6</b>	
<b>State Total</b>	<b>414</b>	<b>5.5</b>					

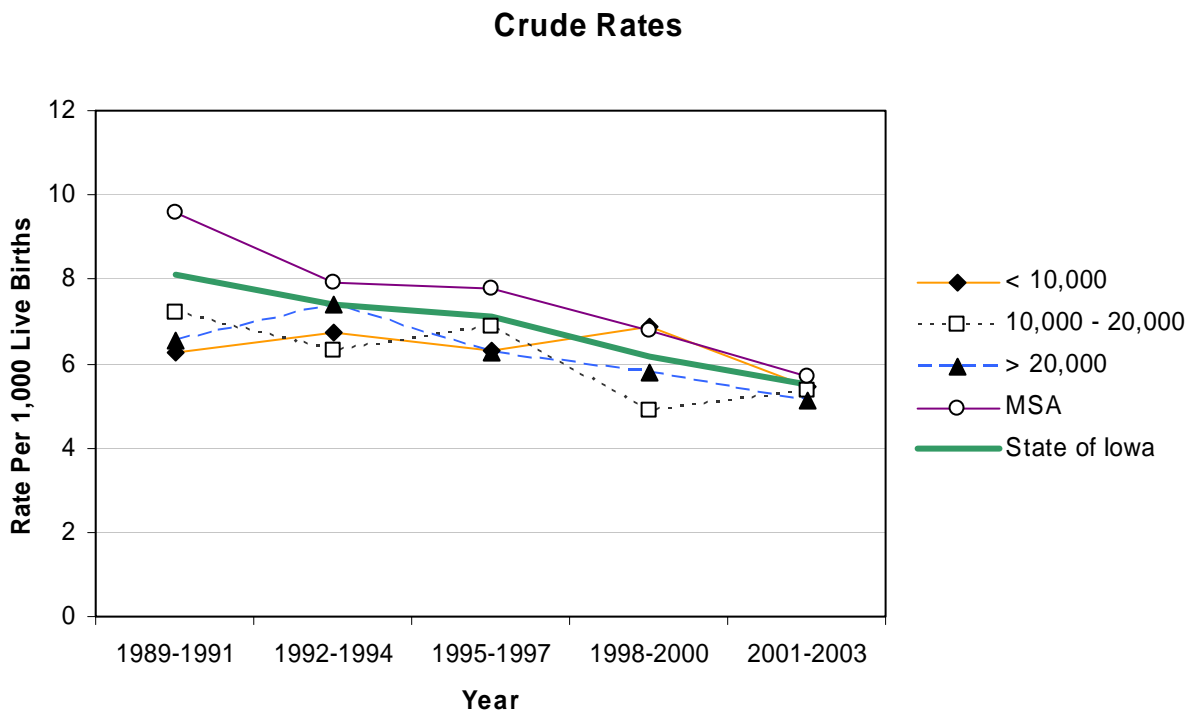
<sup>1</sup>Rates per 1,000 live births

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

## Perinatal Deaths by County Group 1989-2003



## Infant Deaths by County Group 1989-2003



## Congenital Malformations 2002-2003

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	*	*	Monona	*	*	
	Adams	*	*	Monroe	*	*	
	Audubon	*	*	Osceola	*	*	
	Clarke	*	*	Palo Alto	8	35.6	
	Davis	*	*	Pocahontas	*	*	
	Decatur	*	*	Ringgold	*	*	
	Fremont	*	*	Taylor	*	*	
	Howard	5	23.7	Van Buren	*	*	
	Ida	5	29.8	Wayne	*	*	
	Lucas	*	*	Worth	*	*	
				<b>Total</b>	53	15.5	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	15	42.1	Hardin	9	22.3
		Appanoose	14	41.7	Humboldt	*	*
Butler		*	*	Iowa	9	23.9	
Calhoun		*	*	Jefferson	7	23.7	
Cass		*	*	Keokuk	*	*	
Cedar		11	28.4	Kossuth	14	42.6	
Cherokee		*	*	Louisa	*	*	
Chickasaw		*	*	Lyon	7	21.8	
Clay		11	26.7	Mitchell	5	20.3	
Clayton		5	12.8	Montgomery	*	*	
Crawford		6	13.1	O'Brien	*	*	
Delaware		6	14.0	Page	10	29.7	
Dickinson		7	21.0	Poweshiek	6	15.5	
Emmet		*	*	Sac	*	*	
Floyd		*	*	Shelby	*	*	
Franklin		*	*	Tama	*	*	
Greene		6	29.4	Union	5	17.7	
Hamilton		*	*	Winnebago	*	*	
Hancock		7	32.1	Wright	*	*	
				<b>Total</b>	204	17.1	
Counties with 2004 Population > 20,000	Boone	15	24.6	Lee	15	18.8	
	Buchanan	6	10.0	Mahaska	6	11.3	
	Buena Vista	5	9.9	Marion	18	22.1	
	Carroll	*	*	Marshall	14	12.6	
	Cerro Gordo	6	6.0	Muscatine	13	10.5	
	Clinton	16	14.3	Plymouth	5	8.2	
	Des Moines	19	19.1	Sioux	14	15.2	
	Fayette	*	*	Wapello	20	21.4	
	Henry	8	18.4	Webster	13	13.7	
	Jackson	*	*	Winneshiek	*	*	
	Jasper	12	13.4	<b>Total</b>	220	13.9	
	MSA Counties	Benton	*	*	Linn	44	8.0
		Black Hawk	17	5.4	Madison	*	*
Bremer		*	*	Mills	*	*	
Dallas		10	8.4	Polk	84	6.7	
Dubuque		19	8.0	Pottawattamie	36	14.8	
Grundy		*	*	Scott	51	11.3	
Guthrie		*	*	Story	21	11.5	
Harrison		7	20.2	Warren	11	11.2	
Johnson		22	7.4	Washington	13	20.9	
Jones		5	11.7	Woodbury	14	4.4	
				<b>Total</b>	364	8.2	
<b>State Total</b>	841	11.1					

<sup>1</sup>Rates per 1,000 live births

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

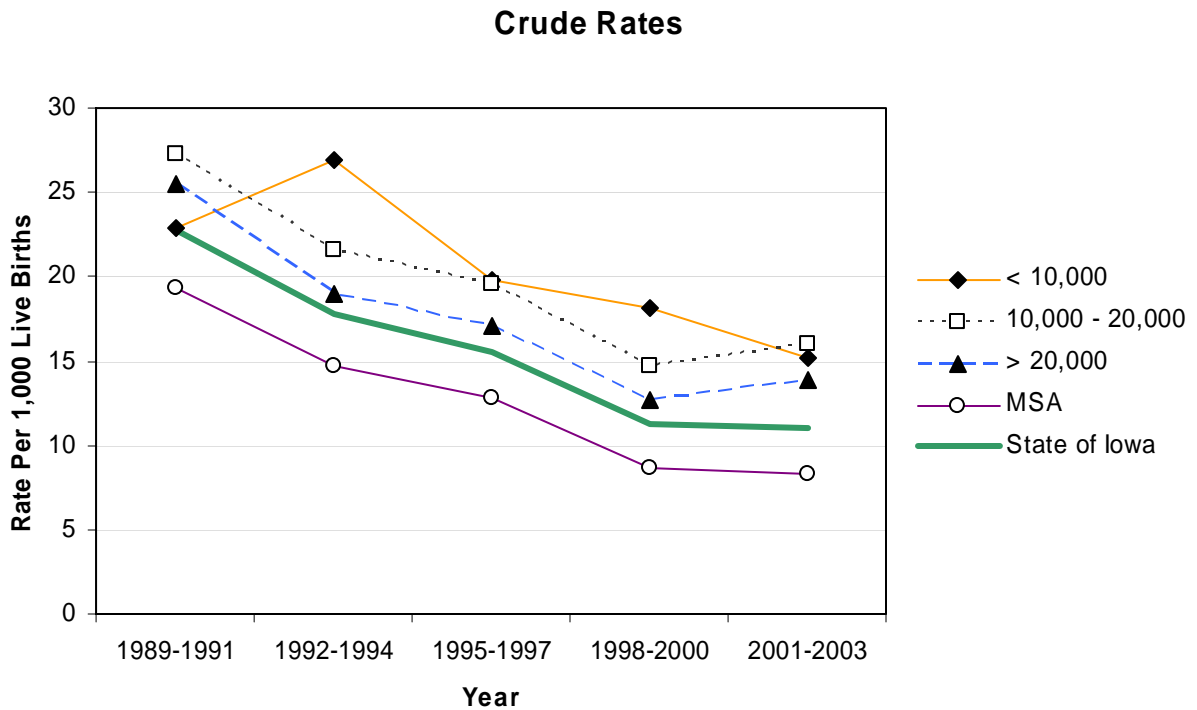
## Birth Defects 2000-2002

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>	
Counties with 2004 Population < 10,000	Adair	8	38.6	Monona	10	31.4	
	Adams	11	90.2	Monroe	11	41.4	
	Audubon	6	38.5	Osceola	8	36.4	
	Clarke	15	43.9	Palo Alto	12	37.2	
	Davis	19	51.6	Pocahontas	12	55.0	
	Decatur	16	59.7	Ringgold	5	26.9	
	Fremont	5	20.3	Taylor	9	37.2	
	Howard	9	27.2	Van Buren	14	51.7	
	Ida	11	44.9	Wayne	13	52.2	
	Lucas	13	38.9	Worth	12	50.4	
				<b>Total</b>	219	42.5	
	Counties with 2004 Population 10,000 – 20,000	Allamakee	19	37.0	Hardin	27	42.9
		Appanoose	29	66.5	Humboldt	10	30.9
Butler		24	51.6	Iowa	29	53.5	
Calhoun		16	53.2	Jefferson	25	56.1	
Cass		27	58.6	Keokuk	19	44.9	
Cedar		18	31.1	Kossuth	25	50.9	
Cherokee		20	52.9	Louisa	22	42.1	
Chickasaw		19	42.9	Lyon	*	*	
Clay		21	35.2	Mitchell	11	26.8	
Clayton		23	39.2	Montgomery	17	41.0	
Crawford		25	39.6	O'Brien	16	31.7	
Delaware		24	37.3	Page	23	46.1	
Dickinson		13	26.9	Poweshiek	27	44.6	
Emmet		7	18.4	Sac	13	40.0	
Floyd		20	35.5	Shelby	17	40.5	
Franklin		13	36.1	Tama	38	53.7	
Greene		19	63.8	Union	34	85.2	
Hamilton		22	40.0	Winnebago	14	36.9	
Hancock	23	61.3	Wright	17	35.0		
			<b>Total</b>	766-770	42.6-42.7		
Counties with 2004 Population > 20,000	Boone	41	45.7	Lee	47	38.4	
	Buchanan	38	41.9	Mahaska	34	41.0	
	Buena Vista	31	42.6	Marion	83	69.9	
	Carroll	22	30.2	Marshall	62	37.9	
	Cerro Gordo	65	43.1	Muscatine	73	38.0	
	Clinton	66	36.7	Plymouth	25	28.0	
	Des Moines	63	40.5	Sioux	32	23.0	
	Fayette	33	51.5	Wapello	84	64.2	
	Henry	35	48.6	Webster	100	68.3	
	Jackson	25	36.3	Winneshiek	12	20.3	
	Jasper	73	53.1	<b>Total</b>	1,044	43.5	
	MSA Counties	Benton	34	36.4	Linn	369	44.4
Black Hawk		255	53.7	Madison	24	41.7	
Bremer		27	36.3	Mills	15	30.1	
Dallas		79	46.6	Polk	840	45.5	
Dubuque		151	42.5	Pottawattamie	121	33.7	
Grundy		22	57.1	Scott	226	33.1	
Guthrie		15	36.0	Story	87	31.2	
Harrison		22	42.0	Warren	65	43.0	
Johnson		153	36.5	Washington	29	31.3	
Jones		21	33.2	Woodbury	166	33.8	
				<b>Total</b>	2,721	41.1	
<b>State Total</b>		4,750-4			41.8-41.9		

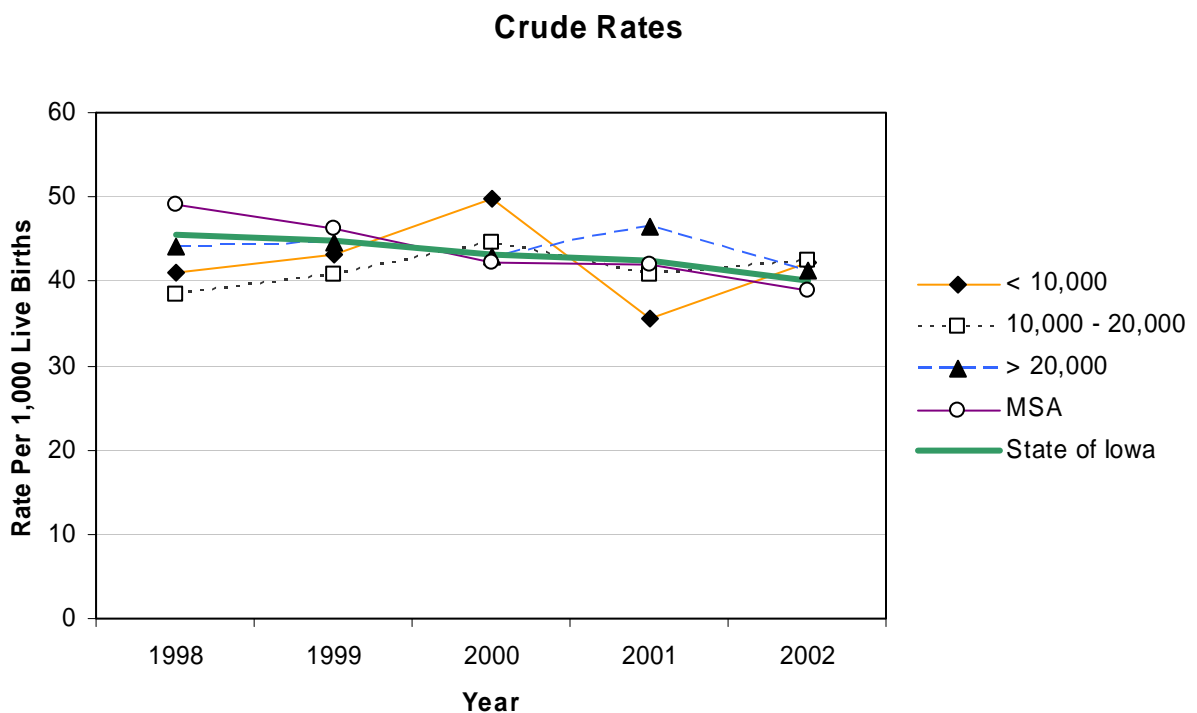
<sup>1</sup>Rates per 1,000 live births

Source: Iowa Birth Defects Registry, The University of Iowa

## Congenital Malformations by County Group 1989-2003



## Birth Defects by County Group 1998-2002



## Selected Birth Defects in Iowa 2000-2002

Defect Name	Defects	Crude <sup>1</sup>
Anencephalus	32	0.28
Aniridia	23	0.20
Anophthalmos Microphthal	30	0.26
Aortic Valve Stenosis and Atresia	132	1.16
Atrial Septal Defect	786	6.93
Bladder Exstrophy	4	0.04
Cleft Lip	144	1.27
Cleft Palate without Cleft Lip	57	0.50
Club foot without CNS Defect	277	2.44
Coarctation of Aorta	60	0.53
Coloboma Of Eye	21	0.19
Common Truncus	17	0.15
Congenital Arthrogryposis	37	0.33
Congenital Cataract	18	0.16
Conus Arteriosus	114	1.01
Down Syndrome (Trisomy 21)	163	1.44
Encephalocele	10	0.09
Endocardial Cushion Defect	70	0.62
Gastroschisis	51	0.45
Hydrocephalus without Spina Bifida	123	1.08
Hypoplastic Left Heart Syndrome	45	0.40
Lung Agenesis and Hypoplasia	37	0.33
Microcephalus	92	0.81
Omphalocele	28	0.25
Patent Ductus Arteriosus	417	3.68
Pulmonary Artery Anomaly	150	1.32
Pulmonary Valve Stenosis and Atresia	187	1.65
Rectal and Intestinal Atresia and Stenosis	42	0.37
Reduction Deformity of Lower Limbs	34	0.30
Reduction Deformity of Upper Limbs	63	0.56
Renal Agenesis	79	0.70
Spina Bifida without Anecephalus	42	0.37
Tetralogy of Fallot	36	0.32
Tracheo-Esophageal Anomalies	32	0.28
Transposition of Great Arteries	64	0.56
Tricuspid Valve Stenosis and Atresia	261	2.30
Trisomy 13 (Patau's Syndrome)	16	0.14
Trisomy 18 (Edward's Syndrome)	29	0.26
Ventricular Septal Defect	499	4.40

<sup>1</sup>Rates per 1,000 live births

Source: Iowa Birth Defects Registry, The University of Iowa