

# Infants Born at Highest Risk

## DEFINITION

*Infants born at highest risk* is the percentage of babies born to Rhode Island women who were under age 20, unmarried and had less than 12 years of education.

## SIGNIFICANCE

Maternal marital status, age, and education level at birth influence the likelihood that a child will live in poverty and predict many developmental vulnerabilities. The poverty rate for children born to a teenaged, unmarried mother who did not graduate from high school is 78%. In contrast, the poverty rate for children born to married women over age 20 with a high school diploma is 9%.<sup>1</sup>

Most children facing these three economic and social risk factors at birth continue to face great challenges throughout childhood. Nationally, less than half of teen mothers complete high school and approximately 2% earn a college degree by age 30.<sup>2</sup> Young mothers without a high school diploma are likely to remain unmarried and a majority will be persistently low-income. Children born to mothers under age 20 are less likely to be ready for school at kindergarten entry, more likely to perform poorly in school and less likely to complete high school themselves.<sup>3,4,5</sup>

Brain development proceeds rapidly during the infant and toddler years. By age 3, a child's brain has grown to 90% of its adult size and the foundation of many cognitive structures and systems are in place.<sup>6</sup> Healthy brain development depends on attentive, nurturing caregiving in infancy.<sup>7</sup> Research shows that helping families with multiple risk factors meet their basic needs and develop nurturing skills during the prenatal, infancy and toddler periods promotes success in school.<sup>8</sup>

A national analysis of early childhood interventions indicates that the most effective interventions have common design characteristics including: individualized services, highly trained staff, high quality programming, adequate intensity and duration, early initiation of services, trusting and continuous relationships between the service provider and the family, and a comprehensive, family-centered approach.<sup>9</sup> Cost-benefit studies show that providing effective, intensive interventions to at-risk young children and their families can yield up to a \$17.00 return on every \$1.00 invested.<sup>10</sup> Economists and scientists note that improving the social and cognitive environments of disadvantaged young children is the most cost-effective strategy for reducing child abuse and neglect, promoting school readiness and strengthening the future workforce.<sup>11</sup>

## Infants Born with Identified Risk Factors, Rhode Island, 2007

	# OF BIRTHS	# BORN AT RISK*	# BORN AT HIGHEST RISK**
Central Falls	380	365	40 (11%)
Newport	308	265	17 (6%)
Pawtucket	1,166	1,078	86 (7%)
Providence	2,936	2,797	277 (9%)
West Warwick	409	356	10 (2%)
Woonsocket	653	602	47 (7%)
Core Cities	5,852	5,463	477 (8%)
Remainder of State	6,156	4,908	171 (3%)
Rhode Island	12,010	10,372	648 (5%)

\* Births with at least one risk factor identified by the Rhode Island Department of Health's Newborn Risk Assessment Program.

\*\* Births to mothers who were younger than 20, single and without a high school degree.

Source: Rhode Island Department of Health, KIDSNET Database, 2007.

◆ **There are three important social and economic risk factors present at birth that, when combined, strongly predict childhood poverty and poor education outcomes – having a mother who is younger than 20, unmarried and without a high school degree.<sup>12</sup> Studies show that effective interventions targeting this population can improve child and family outcomes and yield a strong return on investment.<sup>13</sup>**

◆ **In 2007 in Rhode Island, 648 (5%) babies were born to unmarried teen mothers without high school diplomas.<sup>14</sup>**

## Rhode Island Newborn Risk Assessment Program

◆ **The Rhode Island Department of Health screens all infants born in the state to identify risks for poor developmental outcomes, including: developmental disabilities, low birth weight, medical fragility, inadequate prenatal care, low Apgar scores at birth, low maternal education, young maternal age, advanced maternal age, single mother, first time mother, mother who has given birth more than five times, parental characteristics indicating vulnerability (e.g., chronic illness), and low income (indicated by use of Medicaid/Rite Care health insurance).<sup>15</sup>**

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Table 4. Infants Born at Highest Risk, Rhode Island, 2007

CITY/TOWN	NUMBER OF BIRTHS	BIRTHS TO MOTHERS WITHOUT A HIGH SCHOOL DEGREE	BIRTHS TO SINGLE MOTHERS	BIRTHS TO MOTHERS YOUNGER THAN AGE 20	BIRTHS TO MOTHERS WITH ALL 3 RISK FACTORS	% BIRTHS WITH ALL 3 RISK FACTORS
Barrington	116	1	13	4	1	<1%
Bristol	169	8	48	7	2	1%
Burrillville	127	9	39	3	2	2%
Central Falls	380	154	275	62	40	11%
Charlestown	57	4	15	3	2	4%
Coventry	319	20	80	16	6	2%
Cranston	834	88	306	57	32	4%
Cumberland	310	17	82	22	7	2%
East Greenwich	97	4	14	4	3	3%
East Providence	530	62	204	43	21	4%
Exeter	45	5	13	0	0	0%
Foster	42	3	9	1	0	0%
Glocester	65	2	16	2	1	2%
Hopkinton	91	7	28	2	0	0%
Jamestown	33	0	2	0	0	0%
Johnston	283	25	107	18	7	2%
Lincoln	181	10	46	9	3	2%
Little Compton	17	2	5	1	0	0%
Middletown	196	7	61	14	4	2%
Narragansett	100	3	31	4	3	3%
New Shoreham	7	0	1	0	0	0%
Newport	308	45	138	33	17	6%
North Kingstown	249	10	60	12	5	2%
North Providence	275	21	114	21	7	3%
North Smithfield	83	5	21	4	2	2%
Pawtucket	1,166	273	720	141	86	7%
Portsmouth	142	5	33	6	3	2%
Providence	2,936	951	1,994	449	277	9%
Richmond	81	7	28	7	3	4%
Scituate	73	1	18	3	1	1%
Smithfield	150	6	31	6	2	1%
South Kingstown	228	15	61	14	8	4%
Tiverton	72	5	27	2	1	1%
Warren	94	9	38	9	3	3%
Warwick	799	80	274	56	30	4%
West Greenwich	54	3	12	5	1	2%
West Warwick	409	59	194	35	10	2%
Westerly	237	31	87	15	11	5%
Woonsocket	653	172	404	77	47	7%
Unknown	2	0	0	0	0	NA
<b>Core Cities</b>	<b>5,852</b>	<b>1,654</b>	<b>3,725</b>	<b>797</b>	<b>477</b>	<b>8%</b>
<b>Remainder of State</b>	<b>6,156</b>	<b>475</b>	<b>1,924</b>	<b>370</b>	<b>171</b>	<b>3%</b>
<b>Rhode Island</b>	<b>12,010</b>	<b>2,129</b>	<b>5,649</b>	<b>1,167</b>	<b>648</b>	<b>5%</b>

## Source of Data for Table/Methodology

The Rhode Island Department of Health, KIDSNET Database, 2007. Unknown refers to infants born to Rhode Island mothers whose residence was not recorded.

## References

- <sup>1,3,12</sup> *2004 Kids Count data book: State profiles of child well-being*. (2004). Baltimore, MD: The Annie E. Casey Foundation.
- <sup>2</sup> *Fact sheet: Why the education community cares about preventing teen pregnancy: Notes from the field*. (2006). Washington, DC: National Campaign to Prevent Teen Pregnancy.
- <sup>4</sup> Terry-Humen, E., Manlove, J., & Moore, K. A. (2005). *Playing catch up: How children born to teen mothers fare*. Washington, DC: National Campaign to Prevent Teen Pregnancy.
- <sup>5</sup> *Teen pregnancy – So what?* (2006). Washington, DC: National Campaign to Prevent Teen Pregnancy.
- <sup>6</sup> Perry, B. D. (2001). *Bonding and attachment in maltreated children: Consequences of emotional neglect in childhood*. Houston, TX: The Child Trauma Academy.
- <sup>7</sup> Perry, B. D. (2002). Childhood experience and the expression of genetic potential: What childhood neglect tells us about nature and nurture. *Brain and Mind*, 3, 79-100.
- <sup>8</sup> Zero to Three Policy Center. (n.d.). *Good health, strong families, positive early learning experiences: The foundation for improving outcomes for infants and toddlers*. Retrieved February 5, 2007, www.zerotothree.org
- <sup>9</sup> Shonkoff, J. P. & Phillips, D. A. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.
- <sup>10,13</sup> Karoly, L. A., Kilburn, M. R., Cannon, J. S., Bigelow, J. H., & Christina, R. (2005). Many happy returns: Early childhood programs entail costs, but the paybacks could be substantial. *RAND Review*, 29(3), 10-17.
- <sup>11</sup> Knudsen, E. I., Heckman, J. J., Cameron, J. L., & Shonkoff, J. P. (2006). Economic, neurobiological, and behavioral perspectives on building America's future workforce. *Proceedings of the National Academy of Sciences*, 103(27), 10155-10162.
- <sup>14,15</sup> Rhode Island Department of Health, 2007.