

Texas Birth Defects Registry (TBDR) Annual Report

Table 3. Prevalence of Selected Birth Defects by Mother's Age, Texas, 1999–2021

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Central Nervous System				
Anencephaly*	<20 years	310	3.16	2.80 – 3.51
	20-24 years	589	2.59	2.38 – 2.80
	25-29 years	610	2.50	2.30 – 2.69
	30-34 years	429	2.16	1.96 – 2.37
	35-39 years	179	1.92	1.64 – 2.21
	40+ years	51	2.49	1.86 – 3.28
Spina bifida (without anencephaly)*	<20 years	330	3.36	3.00 – 3.72
	20-24 years	823	3.62	3.38 – 3.87
	25-29 years	906	3.71	3.47 – 3.95
	30-34 years	744	3.75	3.48 – 4.02
	35-39 years	371	3.99	3.58 – 4.39
	40+ years	101	4.94	3.98 – 5.90
Encephalocele*	<20 years	120	1.22	1.00 – 1.44
	20-24 years	230	1.01	0.88 – 1.14
	25-29 years	213	0.87	0.75 – 0.99
	30-34 years	160	0.81	0.68 – 0.93
	35-39 years	101	1.09	0.87 – 1.30
	40+ years	30	1.47	0.99 – 2.09
Microcephaly, severe (head circumference <3 rd percentile)*	<20 years	648	6.60	6.09 – 7.10
	20-24 years	1,272	5.60	5.29 – 5.91
	25-29 years	1,123	4.59	4.33 – 4.86
	30-34 years	869	4.38	4.09 – 4.67
	35-39 years	493	5.30	4.83 – 5.77
	40+ years	165	8.07	6.84 – 9.30
Holoprosencephaly*	<20 years	119	1.21	0.99 – 1.43
	20-24 years	215	0.95	0.82 – 1.07
	25-29 years	231	0.95	0.82 – 1.07
	30-34 years	197	0.99	0.85 – 1.13
	35-39 years	119	1.28	1.05 – 1.51
	40+ years	39	1.91	1.36 – 2.61
Hydrocephaly (without spina bifida)*	<20 years	890	9.06	8.46 – 9.65
	20-24 years	1,743	7.68	7.32 – 8.04
	25-29 years	1,871	7.65	7.31 – 8.00
	30-34 years	1,541	7.76	7.37 – 8.15
	35-39 years	858	9.22	8.60 – 9.84
	40+ years	270	13.20	11.63 – 14.78
Eye and Ear				
Anophthalmia*	<20 years	53	0.54	0.40 – 0.71
	20-24 years	56	0.25	0.19 – 0.32
	25-29 years	63	0.26	0.20 – 0.33
	30-34 years	44	0.22	0.16 – 0.30
	35-39 years	27	0.29	0.19 – 0.42
	40+ years	13	0.64	0.34 – 1.09

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Microphthalmia*	<20 years	239	2.43	2.12 – 2.74
	20-24 years	532	2.34	2.14 – 2.54
	25-29 years	578	2.36	2.17 – 2.56
	30-34 years	524	2.64	2.41 – 2.87
	35-39 years	343	3.69	3.30 – 4.08
	40+ years	173	8.46	7.20 – 9.72
Cataract*	<20 years	173	1.76	1.50 – 2.02
	20-24 years	419	1.85	1.67 – 2.02
	25-29 years	472	1.93	1.76 – 2.11
	30-34 years	371	1.87	1.68 – 2.06
	35-39 years	213	2.29	1.98 – 2.60
	40+ years	74	3.62	2.84 – 4.54
Anotia or microtia*	<20 years	297	3.02	2.68 – 3.37
	20-24 years	770	3.39	3.15 – 3.63
	25-29 years	832	3.40	3.17 – 3.64
	30-34 years	768	3.87	3.59 – 4.14
	35-39 years	397	4.27	3.85 – 4.69
	40+ years	118	5.77	4.73 – 6.81
Cardiac and Circulatory				
Common truncus*	<20 years	64	0.65	0.50 – 0.83
	20-24 years	163	0.72	0.61 – 0.83
	25-29 years	167	0.68	0.58 – 0.79
	30-34 years	171	0.86	0.73 – 0.99
	35-39 years	84	0.90	0.72 – 1.12
	40+ years	23	1.12	0.71 – 1.69
Transposition of the great vessels*	<20 years	286	2.91	2.57 – 3.25
	20-24 years	680	2.99	2.77 – 3.22
	25-29 years	833	3.41	3.18 – 3.64
	30-34 years	702	3.54	3.27 – 3.80
	35-39 years	343	3.69	3.30 – 4.08
	40+ years	95	4.64	3.76 – 5.68
Double outlet right ventricle*	<20 years	212	2.16	1.87 – 2.45
	20-24 years	463	2.04	1.85 – 2.22
	25-29 years	556	2.27	2.09 – 2.46
	30-34 years	428	2.16	1.95 – 2.36
	35-39 years	278	2.99	2.64 – 3.34
	40+ years	109	5.33	4.33 – 6.33
Tetralogy of Fallot*	<20 years	326	3.32	2.96 – 3.68
	20-24 years	781	3.44	3.20 – 3.68
	25-29 years	877	3.59	3.35 – 3.83
	30-34 years	808	4.07	3.79 – 4.35
	35-39 years	504	5.42	4.94 – 5.89
	40+ years	189	9.24	7.92 – 10.56

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Ventricular septal defect*	<20 years	5,287	53.81	52.36 – 55.26
	20-24 years	12,697	55.92	54.95 – 56.89
	25-29 years	14,101	57.69	56.74 – 58.64
	30-34 years	12,486	62.88	61.78 – 63.99
	35-39 years	7,437	79.93	78.12 – 81.75
	40+ years	2,415	118.08	113.37 – 122.79
Atrial septal defect*	<20 years	6,430	65.45	63.85 – 67.05
	20-24 years	15,393	67.79	66.72 – 68.86
	25-29 years	16,652	68.13	67.09 – 69.16
	30-34 years	13,915	70.08	68.92 – 71.25
	35-39 years	8,418	90.48	88.54 – 92.41
	40+ years	2,953	144.38	139.18 – 149.59
Atrioventricular septal defect (endocardial cushion defect)*	<20 years	327	3.33	2.97 – 3.69
	20-24 years	755	3.33	3.09 – 3.56
	25-29 years	852	3.49	3.25 – 3.72
	30-34 years	840	4.23	3.94 – 4.52
	35-39 years	687	7.38	6.83 – 7.94
	40+ years	390	19.07	17.18 – 20.96
Pulmonary valve atresia or stenosis*	<20 years	896	9.12	8.52 – 9.72
	20-24 years	2,152	9.48	9.08 – 9.88
	25-29 years	2,259	9.24	8.86 – 9.62
	30-34 years	2,015	10.15	9.71 – 10.59
	35-39 years	1,124	12.08	11.37 – 12.79
	40+ years	363	17.75	15.92 – 19.57
Tricuspid valve atresia or stenosis*	<20 years	155	1.58	1.33 – 1.83
	20-24 years	430	1.89	1.71 – 2.07
	25-29 years	434	1.78	1.61 – 1.94
	30-34 years	377	1.90	1.71 – 2.09
	35-39 years	213	2.29	1.98 – 2.60
	40+ years	76	3.72	2.93 – 4.65
Ebstein anomaly*	<20 years	65	0.66	0.51 – 0.84
	20-24 years	147	0.65	0.54 – 0.75
	25-29 years	182	0.74	0.64 – 0.85
	30-34 years	167	0.84	0.71 – 0.97
	35-39 years	82	0.88	0.70 – 1.09
	40+ years	33	1.61	1.11 – 2.27
Aortic valve stenosis*	<20 years	174	1.77	1.51 – 2.03
	20-24 years	517	2.28	2.08 – 2.47
	25-29 years	582	2.38	2.19 – 2.57
	30-34 years	501	2.52	2.30 – 2.74
	35-39 years	289	3.11	2.75 – 3.46
	40+ years	67	3.28	2.54 – 4.16

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Hypoplastic left heart syndrome*	<20 years	204	2.08	1.79 – 2.36
	20-24 years	486	2.14	1.95 – 2.33
	25-29 years	552	2.26	2.07 – 2.45
	30-34 years	442	2.23	2.02 – 2.43
	35-39 years	207	2.22	1.92 – 2.53
	40+ years	72	3.52	2.75 – 4.43
Patent ductus arteriosus*	<20 years	4,892	49.79	48.40 – 51.19
	20-24 years	11,545	50.84	49.92 – 51.77
	25-29 years	12,861	52.62	51.71 – 53.53
	30-34 years	11,158	56.20	55.15 – 57.24
	35-39 years	7,062	75.90	74.13 – 77.67
	40+ years	2,803	137.05	131.98 – 142.12
Coarctation of the aorta*	<20 years	462	4.70	4.27 – 5.13
	20-24 years	1,043	4.59	4.31 – 4.87
	25-29 years	1,330	5.44	5.15 – 5.73
	30-34 years	1,048	5.28	4.96 – 5.60
	35-39 years	607	6.52	6.01 – 7.04
	40+ years	204	9.97	8.61 – 11.34
Respiratory				
Choanal atresia or stenosis*	<20 years	100	1.02	0.83 – 1.24
	20-24 years	268	1.18	1.04 – 1.32
	25-29 years	286	1.17	1.03 – 1.31
	30-34 years	299	1.51	1.34 – 1.68
	35-39 years	145	1.56	1.30 – 1.81
	40+ years	42	2.05	1.48 – 2.78
Agenesis, aplasia, or hypoplasia of the lung*	<20 years	331	3.37	3.01 – 3.73
	20-24 years	685	3.02	2.79 – 3.24
	25-29 years	706	2.89	2.68 – 3.10
	30-34 years	503	2.53	2.31 – 2.75
	35-39 years	286	3.07	2.72 – 3.43
	40+ years	77	3.76	2.97 – 4.71
Oral Clefts				
Cleft palate alone (without cleft lip)*	<20 years	492	5.01	4.57 – 5.45
	20-24 years	1,298	5.72	5.41 – 6.03
	25-29 years	1,447	5.92	5.61 – 6.22
	30-34 years	1,169	5.89	5.55 – 6.22
	35-39 years	650	6.99	6.45 – 7.52
	40+ years	193	9.44	8.11 – 10.77
Cleft lip (with or without cleft palate)*	<20 years	1,152	11.73	11.05 – 12.40
	20-24 years	2,463	10.85	10.42 – 11.28
	25-29 years	2,475	10.13	9.73 – 10.52
	30-34 years	2,018	10.16	9.72 – 10.61
	35-39 years	1,028	11.05	10.37 – 11.72
	40+ years	337	16.48	14.72 – 18.24

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Gastrointestinal				
Tracheoesophageal fistula/ esophageal atresia*	<20 years	221	2.25	1.95 – 2.55
	20-24 years	431	1.90	1.72 – 2.08
	25-29 years	462	1.89	1.72 – 2.06
	30-34 years	447	2.25	2.04 – 2.46
	35-39 years	270	2.90	2.56 – 3.25
	40+ years	113	5.53	4.51 – 6.54
Pyloric stenosis*	<20 years	2,183	22.22	21.29 – 23.15
	20-24 years	4,216	18.57	18.01 – 19.13
	25-29 years	3,659	14.97	14.48 – 15.45
	30-34 years	2,582	13.00	12.50 – 13.51
	35-39 years	1,152	12.38	11.67 – 13.10
	40+ years	212	10.37	8.97 – 11.76
Stenosis or atresia of the small intestine*	<20 years	418	4.25	3.85 – 4.66
	20-24 years	768	3.38	3.14 – 3.62
	25-29 years	708	2.90	2.68 – 3.11
	30-34 years	570	2.87	2.64 – 3.11
	35-39 years	393	4.22	3.81 – 4.64
	40+ years	175	8.56	7.29 – 9.82
Stenosis or atresia of large intestine, rectum, or anal canal*	<20 years	555	5.65	5.18 – 6.12
	20-24 years	1,176	5.18	4.88 – 5.48
	25-29 years	1,181	4.83	4.56 – 5.11
	30-34 years	1,018	5.13	4.81 – 5.44
	35-39 years	589	6.33	5.82 – 6.84
	40+ years	182	8.90	7.61 – 10.19
Hirschsprung disease*	<20 years	112	1.14	0.93 – 1.35
	20-24 years	336	1.48	1.32 – 1.64
	25-29 years	329	1.35	1.20 – 1.49
	30-34 years	262	1.32	1.16 – 1.48
	35-39 years	181	1.95	1.66 – 2.23
	40+ years	48	2.35	1.73 – 3.11
Biliary atresia	<20 years	71	0.72	0.56 – 0.91
	20-24 years	178	0.78	0.67 – 0.90
	25-29 years	161	0.66	0.56 – 0.76
	30-34 years	132	0.66	0.55 – 0.78
	35-39 years	63	0.68	0.52 – 0.87
	40+ years	18	0.88	0.52 – 1.39
Genitourinary				
Hypospadias (among males)*	<20 years	2,646	52.56	50.55 – 54.56
	20-24 years	6,411	55.33	53.97 – 56.68
	25-29 years	7,886	63.07	61.68 – 64.46
	30-34 years	6,949	68.52	66.91 – 70.13
	35-39 years	3,404	71.52	69.11 – 73.92
	40+ years	820	78.73	73.34 – 84.12

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Renal agenesis or dysgenesis*	<20 years	561	5.71	5.24 – 6.18
	20-24 years	1,368	6.02	5.71 – 6.34
	25-29 years	1,586	6.49	6.17 – 6.81
	30-34 years	1,311	6.60	6.25 – 6.96
	35-39 years	747	8.03	7.45 – 8.60
	40+ years	205	10.02	8.65 – 11.40
Bladder exstrophy	<20 years	19	0.19	0.12 – 0.30
	20-24 years	41	0.18	0.13 – 0.24
	25-29 years	39	0.16	0.11 – 0.22
	30-34 years	35	0.18	0.12 – 0.25
	35-39 years	18	0.19	0.11 – 0.31
	40+ years	3	0.15	0.03 – 0.43
Musculoskeletal				
Congenital hip dislocation (without hip dysplasia)*	<20 years	211	2.15	1.86 – 2.44
	20-24 years	519	2.29	2.09 – 2.48
	25-29 years	561	2.30	2.11 – 2.49
	30-34 years	521	2.62	2.40 – 2.85
	35-39 years	280	3.01	2.66 – 3.36
	40+ years	81	3.96	3.15 – 4.92
Talipes equinovarus (clubfoot)*	<20 years	1,673	17.03	16.21 – 17.84
	20-24 years	3,849	16.95	16.42 – 17.49
	25-29 years	3,965	16.22	15.72 – 16.73
	30-34 years	3,162	15.92	15.37 – 16.48
	35-39 years	1,638	17.61	16.75 – 18.46
	40+ years	495	24.20	22.07 – 26.33
Reduction defects of the upper limbs*	<20 years	529	5.38	4.93 – 5.84
	20-24 years	946	4.17	3.90 – 4.43
	25-29 years	932	3.81	3.57 – 4.06
	30-34 years	773	3.89	3.62 – 4.17
	35-39 years	348	3.74	3.35 – 4.13
	40+ years	128	6.26	5.17 – 7.34
Reduction defects of the lower limbs*	<20 years	273	2.78	2.45 – 3.11
	20-24 years	452	1.99	1.81 – 2.17
	25-29 years	481	1.97	1.79 – 2.14
	30-34 years	343	1.73	1.54 – 1.91
	35-39 years	150	1.61	1.35 – 1.87
	40+ years	45	2.20	1.60 – 2.94
Craniosynostosis*	<20 years	390	3.97	3.58 – 4.36
	20-24 years	1,080	4.76	4.47 – 5.04
	25-29 years	1,383	5.66	5.36 – 5.96
	30-34 years	1,285	6.47	6.12 – 6.83
	35-39 years	671	7.21	6.67 – 7.76
	40+ years	179	8.75	7.47 – 10.03

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Achondroplasia*	<20 years	15	0.15	0.09 – 0.25
	20-24 years	63	0.28	0.21 – 0.35
	25-29 years	92	0.38	0.30 – 0.46
	30-34 years	94	0.47	0.38 – 0.58
	35-39 years	40	0.43	0.31 – 0.59
	40+ years	18	0.88	0.52 – 1.39
Diaphragmatic hernia	<20 years	265	2.70	2.37 – 3.02
	20-24 years	613	2.70	2.49 – 2.91
	25-29 years	706	2.89	2.68 – 3.10
	30-34 years	539	2.71	2.49 – 2.94
	35-39 years	293	3.15	2.79 – 3.51
	40+ years	73	3.57	2.80 – 4.49
Omphalocele*	<20 years	217	2.21	1.91 – 2.50
	20-24 years	435	1.92	1.74 – 2.10
	25-29 years	469	1.92	1.75 – 2.09
	30-34 years	402	2.02	1.83 – 2.22
	35-39 years	260	2.79	2.45 – 3.13
	40+ years	127	6.21	5.13 – 7.29
Gastroschisis*	<20 years	1,591	16.19	15.40 – 16.99
	20-24 years	1,837	8.09	7.72 – 8.46
	25-29 years	717	2.93	2.72 – 3.15
	30-34 years	234	1.18	1.03 – 1.33
	35-39 years	82	0.88	0.70 – 1.09
	40+ years	22	1.08	0.67 – 1.63
Chromosomal				
Trisomy 21 (Down syndrome)*	<20 years	736	7.49	6.95 – 8.03
	20-24 years	1,569	6.91	6.57 – 7.25
	25-29 years	1,825	7.47	7.12 – 7.81
	30-34 years	2,398	12.08	11.59 – 12.56
	35-39 years	3,306	35.53	34.32 – 36.74
	40+ years	2,440	119.30	114.57 – 124.04
Trisomy 13 (Patau syndrome)*	<20 years	70	0.71	0.56 – 0.90
	20-24 years	195	0.86	0.74 – 0.98
	25-29 years	205	0.84	0.72 – 0.95
	30-34 years	214	1.08	0.93 – 1.22
	35-39 years	224	2.41	2.09 – 2.72
	40+ years	101	4.94	3.98 – 5.90

Birth Defect (Body System)	Mother's Age (at delivery)	Cases (count)	Prevalence (rate)	Confidence Interval (95% for Prevalence)
Trisomy 18 (Edwards syndrome)*	<20 years	127	1.29	1.07 – 1.52
	20-24 years	303	1.33	1.18 – 1.48
	25-29 years	335	1.37	1.22 – 1.52
	30-34 years	347	1.75	1.56 – 1.93
	35-39 years	589	6.33	5.82 – 6.84
	40+ years	499	24.40	22.26 – 26.54
Infants and fetuses with regular reportable birth defects*	<20 years	44,977	457.80	453.57 – 462.03
	20-24 years	107,085	471.61	468.78 – 474.43
	25-29 years	119,463	488.75	485.97 – 491.52
	30-34 years	103,271	520.11	516.94 – 523.28
	35-39 years	56,434	606.55	601.55 – 611.56
	40+ years	15,940	779.37	767.28 – 791.47

Prevalence (rate) is expressed as the number of cases per 10,000 live births.

*Statistically significant difference in prevalence between at least two age groups [$p < 0.05$].

Please see the Methods section of the Annual Report for additional information:

<https://www.dshs.texas.gov/sites/default/files/birthdefects/annualreport/1999-2021-TBDR-Methods.pdf>

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