

## Arizona

### Arizona Birth Defects Monitoring Program (ABDMP)

**Purpose:** Surveillance, Referral to Services, Referral to Prevention/Intervention Services

**Partner:** Local Health Departments, Hospitals, Environmental Agencies/Organizations, Advocacy Groups, Universities, Community Nursing Services

**Program status:** Currently collecting data

**Start year:** 1986

**Earliest year of available data:** 1986

**Organizational location:** Department of Health (Public Health Statistics)

**Population covered annually:** 87,000

**Statewide:** Yes

**Current legislation or rule:** Legislation enacted 1988; Rule effective 1991 Statute: 36-133; Rule: Arizona Administrative Code R9-4-Article 5

**Legislation year enacted:** 1988

#### Case Definition

**Pregnancy outcome:** Livebirths (All gestational ages and birth weights), Fetal deaths - stillbirths, spontaneous abortions, etc. (Any gestational age or weight if a fetal death certificate was issued), Elective terminations (If fetal death certificate was issued and medical records are available)

**Age:** Up to one year after delivery. If the nature of a defect diagnosed in the first year of life is more precisely diagnosed later in the child's life, and this information is contained in the chart at the time of our review, then the more precise diagnosis and information is used.

**Residence:** Arizona birth to an Arizona resident mother

#### Surveillance Methods

**Case ascertainment:** Active Case Finding

**Vital records:** Birth certificates, Fetal birth certificate, Hospital Discharge Database

**Delivery hospitals:** Disease index or discharge index

**Pediatric & tertiary care hospitals:** Disease index or discharge index

**Other specialty facilities:** Prenatal diagnostic facilities (ultrasound, etc.),

Cytogenetic laboratories, Genetic counseling/clinical genetic facilities

**Other sources:** Midwifery Facilities, Physician reports

#### Case Ascertainment

**Conditions warranting chart review in newborn period:** Any chart with an ICD-9-CM code 740-759/ICD-10-CM code Q00-Q99, Any chart with a selected list of ICD-9-CM codes outside 740-759/ICD-10-CM codes outside Q00-Q99, Any birth certificate with a birth defect box checked, Any chart with selected defects or medical conditions (i.e. abnormal facies, congenital heart disease), All stillborn infants, All prenatally diagnosed or suspected cases

**Conditions warranting chart review beyond the newborn period:** Any infant with a codable defect

**Coding:** CDC coding system based on BPA

#### Data Collected

**Infant/fetus:** Identification information (name, address, date-of-birth, etc.), Demographic information (race/ethnicity, sex, etc.), Birth measurements (weight, gestation, Apgars, etc.), Tests and procedures, Birth defect diagnostic information

**Mother:** Identification information (name, address, date-of-birth, etc.), Demographic information (race/ethnicity, sex, etc.), Gravidity/parity, Illnesses/conditions, Prenatal care, Prenatal diagnostic information, Pregnancy/delivery complications, Family history

**Father:** Identification information (name, address, date-of-birth, etc.), Demographic information (race/ethnicity, sex, etc.)

#### Data Collection Methods and Storage

**Data collection:** Printed abstract/report filled out by staff, Electronic file/report filled out by staff at facility (laptop, web-based, etc.), Electronic file/report filled out by staff at ADHS

**Database collection and storage:** Access, Oracle

#### Data Analysis

**Data analysis software:** SAS, Access

**Quality assurance:** Validity checks, Re-abstraction of cases, Double-checking of assigned codes, Comparison/verification between multiple data sources, Clinical review, Timeliness

**Data use and analysis:** Routine statistical monitoring, Public health program evaluation, Baseline rates, Rates by demographic and other variables, Monitoring outbreaks and cluster investigations, Time trends, Time-space cluster analyses, Capture-recapture analyses, Observed vs. expected analyses, Epidemiological studies (using only program data), Identification of potential cases for other epidemiologic studies, Needs assessment, Service delivery, Referral, Grant proposals, Education/public awareness, Prevention projects

#### System Integration

**System links:** Link to other state registries/databases, Link case finding data to final birth file, We have provided data to environmental programs for their pages and databases

#### Funding

**Funding source:** 3% General state funds, 9% MCH funds, 44% CDC grant

#### Other

**Web site:** <http://azdhs.gov/phs/phstats/bdr/index.htm> and [azhealth.gov/birth-defects](http://azhealth.gov/birth-defects)

**Surveillance reports on file:** Annual Reports;

**Additional information on file:** Arizona Data/Fact Sheets; Resources

**Other comments:** To contact the ABDMP email [abdmp@azdhs.gov](mailto:abdmp@azdhs.gov)

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## **DATA TABLES**

**Arizona**  
**Birth Defects Counts and Prevalence 2014 - 2018 (Prevalence per 10,000 Live Births)**

Defect	Maternal Race/Ethnicity					Total*	Notes
	White, Non-Hispanic	Black, Non-Hispanic	Hispanic	Asian or Pacific Islander, Non-Hispanic	American Indian or Alaska Native, Non-Hispanic		
Anencephalus	24 <i>1.4</i>	6 <i>2.9</i>	37 <i>2.1</i>	2 <i>1.3</i>	7 <i>3.2</i>	76 <i>1.8</i>	
Anophthalmia/microphthalmia	14 <i>0.8</i>	5 <i>2.4</i>	24 <i>1.3</i>	5 <i>3.2</i>	5 <i>2.3</i>	53 <i>1.3</i>	
Anotia/microtia	30 <i>1.7</i>	3 <i>1.5</i>	57 <i>3.2</i>	7 <i>4.5</i>	6 <i>2.8</i>	103 <i>2.5</i>	
Aortic valve stenosis	22 <i>1.3</i>	1 <i>0.5</i>	26 <i>1.5</i>	2 <i>1.3</i>	5 <i>2.3</i>	57 <i>1.4</i>	
Atrioventricular septal defect (Endocardial cushion defect)	86 <i>5.0</i>	13 <i>6.3</i>	93 <i>5.2</i>	5 <i>3.2</i>	18 <i>8.3</i>	215 <i>5.1</i>	
Biliary atresia	14 <i>0.8</i>	0 <i>0.0</i>	9 <i>0.5</i>	1 <i>0.6</i>	1 <i>0.5</i>	25 <i>0.6</i>	
Bladder exstrophy	1 <i>0.1</i>	0 <i>0.0</i>	2 <i>0.1</i>	0 <i>0.0</i>	0 <i>0.0</i>	3 <i>0.1</i>	
Choanal atresia	24 <i>1.4</i>	2 <i>1.0</i>	12 <i>0.7</i>	1 <i>0.6</i>	2 <i>0.9</i>	41 <i>1.0</i>	
Cleft lip alone	62 <i>3.6</i>	5 <i>2.4</i>	53 <i>3.0</i>	4 <i>2.6</i>	13 <i>6.0</i>	137 <i>3.3</i>	
Cleft lip with cleft palate	112 <i>6.5</i>	14 <i>6.8</i>	131 <i>7.3</i>	7 <i>4.5</i>	39 <i>18.0</i>	304 <i>7.3</i>	
Cleft palate alone	107 <i>6.2</i>	15 <i>7.3</i>	119 <i>6.7</i>	9 <i>5.8</i>	24 <i>11.1</i>	275 <i>6.6</i>	
Coarctation of the aorta	92 <i>5.4</i>	7 <i>3.4</i>	92 <i>5.1</i>	2 <i>1.3</i>	15 <i>6.9</i>	210 <i>5.0</i>	
Common truncus (truncus arteriosus)	11 <i>0.6</i>	1 <i>0.5</i>	8 <i>0.4</i>	1 <i>0.6</i>	1 <i>0.5</i>	22 <i>0.5</i>	
Congenital cataract	13 <i>0.8</i>	3 <i>1.5</i>	17 <i>1.0</i>	0 <i>0.0</i>	4 <i>1.8</i>	37 <i>0.9</i>	
Diaphragmatic hernia	51 <i>3.0</i>	8 <i>3.9</i>	62 <i>3.5</i>	7 <i>4.5</i>	6 <i>2.8</i>	135 <i>3.2</i>	
Double outlet right ventricle	44 <i>2.6</i>	7 <i>3.4</i>	58 <i>3.2</i>	4 <i>2.6</i>	13 <i>6.0</i>	126 <i>3.0</i>	
Ebstein anomaly	12 <i>0.7</i>	0 <i>0.0</i>	17 <i>1.0</i>	1 <i>0.6</i>	2 <i>0.9</i>	32 <i>0.8</i>	
Encephalocele	12 <i>0.7</i>	2 <i>1.0</i>	20 <i>1.1</i>	0 <i>0.0</i>	4 <i>1.8</i>	38 <i>0.9</i>	
Esophageal atresia/tracheoesophageal fistula	47 <i>2.7</i>	1 <i>0.5</i>	45 <i>2.5</i>	4 <i>2.6</i>	7 <i>3.2</i>	104 <i>2.5</i>	
Gastroschisis	87 <i>5.1</i>	10 <i>4.9</i>	135 <i>7.5</i>	5 <i>3.2</i>	23 <i>10.6</i>	262 <i>6.3</i>	
Holoprosencephaly	12 <i>0.7</i>	7 <i>3.4</i>	7 <i>0.4</i>	1 <i>0.6</i>	4 <i>1.8</i>	31 <i>0.7</i>	
Hypoplastic left heart syndrome	48 <i>2.8</i>	6 <i>2.9</i>	44 <i>2.5</i>	1 <i>0.6</i>	7 <i>3.2</i>	106 <i>2.5</i>	
Interrupted aortic arch	15 <i>0.9</i>	1 <i>0.5</i>	13 <i>0.7</i>	1 <i>0.6</i>	2 <i>0.9</i>	32 <i>0.8</i>	
Limb deficiencies (reduction defects)	48 <i>2.8</i>	14 <i>6.8</i>	58 <i>3.2</i>	2 <i>1.3</i>	8 <i>3.7</i>	131 <i>3.1</i>	
Omphalocele	40 <i>2.3</i>	12 <i>5.8</i>	40 <i>2.2</i>	4 <i>2.6</i>	2 <i>0.9</i>	99 <i>2.4</i>	
Pulmonary valve atresia and stenosis	59 <i>3.4</i>	7 <i>3.4</i>	73 <i>4.1</i>	9 <i>5.8</i>	20 <i>9.2</i>	168 <i>4.0</i>	
Pulmonary valve atresia	22 <i>1.3</i>	5 <i>2.4</i>	37 <i>2.1</i>	3 <i>1.9</i>	14 <i>6.4</i>	81 <i>1.9</i>	
Single ventricle	6 <i>0.3</i>	2 <i>1.0</i>	12 <i>0.7</i>	0 <i>0.0</i>	0 <i>0.0</i>	20 <i>0.5</i>	
Spina bifida without anencephalus	56 <i>3.3</i>	7 <i>3.4</i>	63 <i>3.5</i>	3 <i>1.9</i>	13 <i>6.0</i>	143 <i>3.4</i>	
Tetralogy of Fallot	72 <i>4.2</i>	13 <i>6.3</i>	59 <i>3.3</i>	4 <i>2.6</i>	16 <i>7.4</i>	164 <i>3.9</i>	

**Arizona**  
**Birth Defects Counts and Prevalence 2014 - 2018 (Prevalence per 10,000 Live Births)**

Defect	Maternal Race/Ethnicity					Total*	Notes
	White, Non-Hispanic	Black, Non-Hispanic	Hispanic	Asian or Pacific Islander, Non-Hispanic	American Indian or Alaska Native, Non-Hispanic		
Total anomalous pulmonary venous connection	21 <i>1.2</i>	2 <i>1.0</i>	36 <i>2.0</i>	4 <i>2.6</i>	10 <i>4.6</i>	73 <i>1.7</i>	
Transposition of the great arteries (TGA)	49 <i>2.9</i>	4 <i>1.9</i>	48 <i>2.7</i>	6 <i>3.9</i>	3 <i>1.4</i>	110 <i>2.6</i>	
Dextro-transposition of great arteries (d-TGA)	42 <i>2.4</i>	3 <i>1.5</i>	37 <i>2.1</i>	5 <i>3.2</i>	2 <i>0.9</i>	89 <i>2.1</i>	
Tricuspid valve atresia and stenosis	7 <i>0.4</i>	1 <i>0.5</i>	25 <i>1.4</i>	2 <i>1.3</i>	7 <i>3.2</i>	42 <i>1.0</i>	
Tricuspid valve atresia	7 <i>0.4</i>	1 <i>0.5</i>	23 <i>1.3</i>	2 <i>1.3</i>	5 <i>2.3</i>	38 <i>0.9</i>	
Trisomy 13	23 <i>1.3</i>	7 <i>3.4</i>	21 <i>1.2</i>	1 <i>0.6</i>	1 <i>0.5</i>	53 <i>1.3</i>	
Trisomy 18	55 <i>3.2</i>	9 <i>4.4</i>	48 <i>2.7</i>	4 <i>2.6</i>	9 <i>4.1</i>	126 <i>3.0</i>	
Trisomy 21 (Down syndrome)	225 <i>13.1</i>	31 <i>15.1</i>	291 <i>16.3</i>	23 <i>14.8</i>	32 <i>14.7</i>	603 <i>14.4</i>	
<b>Total live births</b>	<b>171,852</b>	<b>20,517</b>	<b>178,828</b>	<b>15,566</b>	<b>21,714</b>	<b>418,278</b>	

**Arizona**  
**Birth Defects Counts and Prevalence 2014 - 2018 (Prevalence per 10,000 Live Births)**

Defect	Maternal Age (Years)		Total*	Notes
	Less than 35	35+		
Gastroschisis	252 <i>7.1</i>	8 <i>1.3</i>	262 <i>6.3</i>	
Trisomy 13	33 <i>0.9</i>	20 <i>3.2</i>	53 <i>1.3</i>	
Trisomy 18	64 <i>1.8</i>	60 <i>9.5</i>	126 <i>3.0</i>	
Trisomy 21 (Down syndrome)	296 <i>8.3</i>	304 <i>48.1</i>	603 <i>14.4</i>	
<b>Total live births</b>	<b>355,111</b>	<b>63,148</b>	<b>418,278</b>	

**General comments**

\*Data for totals include unknown and/or other.  
 -Data for conditions from 2018 are provisional.