

**Progress on the Implementation of IC 16-38-4-7 (Birth Problems Registry) as
amended in First Regular Session 112th General Assembly (2001)
Reporting Period: July 2013 – June 2014**

The Indiana Birth Defects and Problems Registry (IBDPR) is a population-based surveillance system that seeks to promote fetal, infant, and child health. The purpose of the Registry is to prevent birth defects and childhood developmental disabilities and to enhance the quality of life of affected Indiana residents.

Birth defects are conditions present at birth that affect the structure or function of an infant's body. They can cause physical, mental, or medical problems. Birth defects affect about 1 in 33 babies born in Indiana each year. They are the leading cause of infant deaths, accounting for more than 20 percent of all infant deaths (National Vital Statistic Report, vol. 61, Number 4, 2013). Babies who survive and live with birth defects are more likely to have life-long physical and cognitive challenges. Annually in the United States, the total hospital costs of children with birth defects exceed \$2.6 billion (Healthcare Cost and Utilization Project statistical brief number 24, 2007). Some of these causes are entirely preventable, while others could be identified early and treated or managed in order to improve the quality of life of affected infants and their families.

The 1986 Indiana General Assembly enacted a law (IC 16-4-10-6) to establish the Birth Problems Registry by January 1, 1987. In 2001, the Indiana Birth Problems Registry law (IC 16-38-4-7; 410 IAC 21-3) was amended to allow additional data sources to be used to improve the quality of the data. Indiana Code 16-38-4-1 was amended in 2013 to include complications resulting from home deliveries. Data regarding homebirths can be found in Table 9 below. During the 2014 legislative session, House Enrolled Act (HEA) 1358 made an amendment to Indiana State Department of Health (ISDH) Birth Defects and Problems Registry, requiring it to collect data on Autism Spectrum Disorders for individuals at any age. Hospitals and other health care providers were informed about the new reporting requirements effective July 1, 2014.

Data from the Indiana Birth Defects and Problems Registry will be used to detect trends in birth defects and suggest areas for further study; to identify epidemiological factors associated with birth defects; to address community concerns about the environmental effects on birth outcomes; to evaluate education, screening, and prevention programs; and to establish efficient referral systems that provide special services for the children with identified birth defects and their families.

Case Ascertainment

IBDPR is considered a "passive" system because initial case ascertainment is through the electronic submission of hospital discharge data (HDD), with defined ICD-9-CM codes that identify birth defects and problems. However, in the early stages of program development, it was determined that up to 25% of the HDD was invalid. Therefore, the program protocols were updated to include medical chart audits (indicative of an "active" birth defects registry) on 49 CDC-targeted conditions. These chart audits are utilized to

ensure the data submitted to the CDC and the Indiana State legislature is as valid as possible and that appropriate information is sent to families of children reported with at least one birth defect.

Due to the legislative changes described above regarding autism spectrum disorders (ASDs), a change in the audit process for those individuals reported to the IBDPR has also changed. Previously, if a child was reported through HDD with autism, a medical chart audit would be completed on that child's medical records. Indiana Code 16-38-4-8 now requires confirmation of diagnosis of any ASD for children reported to the IBDPR up to eight (8) years of age. Therefore, medical chart audits are now completed on all children up to eight (8) years of age reported through HDD with an ASD. The tables below reflect the change in legislation in regards to ASD. In previous years, autism and other ASDs were separated to reflect autism as a targeted condition and other ASDs as reportable conditions. Because all ASDs are now targeted conditions, they are combined in a single category to reflect the total number of individuals reported with an ASD in the tables below. ASDs are described in all tables below as 'Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified.'

Hospital Reporting

Hospitals are required to report birth defects data to the IBDPR when coding of hospital discharge records is completed each month. Currently, all 114 reporting hospitals submit monthly discharge data using the ISDH State Health Gateway web portal. As of the first week of September 2014, 7 hospitals had completed reporting up to August, 64 hospitals had reported up to July, 27 hospitals up to June, 7 hospitals up to May, 1 hospital up to April, and 7 hospitals up to March of 2014. The remaining hospital has reported up to November 2013. Several reasons exist for delays or irregularities in data reporting such as changes in data collection or recording systems and lack of resources (including lack of health information management, medical records, and/or information technology staff).

Physician Reporting

The IBDPR uses physician reporting to identify children with birth defects that may not be diagnosed at birth and may, therefore, be diagnosed in a doctor's office rather than a hospital. Since IBDPR staff considers a physician's submission to be confirmation of a diagnosis, no chart auditing is done on charts in a physician's office. If the IBDPR has received duplicate information from a hospital and no chart audit has been completed, the physician's report will serve as confirmation of that birth defect and no chart audit will be done at the hospital. IBDPR staff expects that reports of children with ASDs and fetal alcohol syndrome will be ascertained primarily through physician reporting, since the diagnostic criteria for both conditions include developmental delays that are not detectable at birth.

In December 2013, an electronic information packet was sent to physicians in recognition of January being Birth Defects Awareness Month and to encourage the use of the web-based Physician Reporting Center within the ISDH State Health Gateway. The electronic packet included a letter from the State Health Commissioner, reminding physicians of the legal requirement for reporting to the IBDPR including links to ISDH State Health Gateway, a list of reportable conditions and instructions for accessing and creating an account within the ISDH State Health Gateway. This information packet was sent to 3588 statewide health care providers from the State Health Commissioner's e-mail account. Provider e-mail addresses were obtained by combining information from Indiana Professional Licensing Agency and Centers for Medicare and Medicaid Services.

During the current reporting period (July 2013 - June 2014), 486 reports representing 442 children with birth defects were reported by 14 physicians and 5 psychologists. There were no reports from other authorized health care providers (such as osteopathic physicians and medical residents) during this period.

Application Development

Beginning in 2013, an initiative began to move the old IBDPR Chart Audit Stand Alone (CASA) software to a newer web-based application. The initiative took approximately one year to complete, and in July 2014, the IBDPR was functioning within the web-based application. As a precaution to preserve data integrity, chart auditors were not able to complete medical chart audits during this transition. When the project was complete in July 2014, chart auditors were trained to use the IBDPR module within the web-based application. Medical chart audits resumed after this training.

Program Development

As stated earlier, data from IBDPR is utilized to improve the quality of the data available on birth defects in Indiana and to provide information (including educational information and a list of resources) to the parents/guardians and primary care providers of children with confirmed birth defects.

Each time a change occurs within the rules regarding case ascertainment, IBDPR staff ensure that all appropriate personnel, including health care providers and birthing facility staff, receive timely notification on legislative change. In response to the amendment of IC 16-38-4-8 regarding reporting of ASDs, hospitals and physicians were made aware of the change that took effect on July 1, 2014.

Due to the development and proceeding initial rollout of the IBDPR web-based application as described above, the number of individual completed chart audits is substantially less this year than in previous years. During this shortened audit period of only three (3) months, auditing efforts were concentrated on larger birth facilities where most children are reported through HDD. As of October 14, 2014, a total of 2,509 children born from 2007-2011 were reported with a total of 3,185 targeted conditions that were not previously audited in the old software. Of those targeted conditions reported,

62% have been audited and 29% of those have been reviewed (by a reviewer who confirms or invalidates the condition) since July 1, 2014. Lower percentages of confirmed or probable cases are reflected in Table 5 due to the decreased number of completed and reviewed audits. It is expected that the number of audited and reviewed medical chart audits will return to normal in 2015.

Although the initiative to move IBDPR into a web-based application created challenges such as the inability to complete all audits, the application now allows for an improved user-interface experience. The web-based application also allows for the appropriate linkage of data between programs. For example, the IBDPR is now able to link with pulse oximetry screening data in order to verify if critical congenital heart disease (CCHD) was present when a baby did not pass their pulse oximetry screen. This allows for a more accurate picture of the number of false positives occurring with pulse oximetry screening in the state. Because the current report covers a time period (2007-2011) before the state-wide implementation of mandatory newborn pulse oximetry screening (January 1, 2012), data regarding the detection rate of critical congenital heart disease (CCHD) through pulse oximetry screening is not yet available. It is expected that this data will be available in the 2015 report.

The change in IC 16-38-4-8 now requires the state department to provide information on ASD resources to families of children or individuals reported to the IBDPR with an ASD. The program developed an ASD follow-up module within the application in early 2014 in order to comply with this requirement. The module is now used as a tool for the IBDPR program to send informational letters to families of children or individuals reported to the registry with an ASD over the age of eight (8) years. The program also worked very closely with the Children's Special Health Care Services Program at ISDH to perform verbal follow-up with families of children reported to the registry with an ASD under the age of eight (8).

National Meetings Attended

The 17th annual meeting of the National Birth Defects Prevention Network (NBDPN) was held using a virtual meeting format of four 3 hour sessions from February through May. It was designed to provide opportunities and direction for birth defects surveillance, research and prevention and to enhance relationships between federal, state, and professional organizations that are working towards common goals. Two IBDPR staff members attended these meetings.

Statute Requisites

As the IBDPR collects data daily on children from birth to three or five years of age (or individuals at any age diagnosed with an ASD), the same report for the same time period, compiled on different dates, may indicate different values. The data for this report was compiled on 10/21/2014. Due to the small numbers of birth defects per year, data will be grouped in multiple years, as is required by CDC for the national publication. This report

includes Indiana data available for 5 years from 2007-2011. According to Vital Records data, 429,891 live births occurred during these years.

Not only was the IBDPR redesigned and moved into a web-based application as discussed above, the data was also transferred from an older data model to a new, more modernized data model. During the data transfer and analysis, some discrepancies were observed of confirmed and probable cases for certain conditions compared to previous years' reports. The program is currently investigating those discrepancies. It is presumed that the discrepancies in data can be attributed to one or more of the following potential causes: a change in reviewer personnel who makes the determination as to the validity of a particular case; duplicate records created by multiple data sources which have since merged together as one record since the 2013 report; or unknown data transfer related issues. Going forward, the program has a plan in place to effectively identify exact discrepancies between the data that is reported in the below tables with data that will be reported in 2015.

The following paragraphs explain the attached tables in more detail:

Table 1 shows the number of unduplicated children reported by birthing facilities through ICD-9-CM codes at discharge for each reportable condition category. Since many children with birth defects or problems have more than one defect some children may be included in multiple condition categories. These numbers do not reflect confirmation of the defect, merely hospital and physician reporting.

Table 2 shows the number of unduplicated children who were reported with one reportable condition; **Table 3** shows the number of unduplicated children reported with more than one reportable condition. These tables are subsets of Table 1, and again, do not reflect whether there is a confirmed diagnosis that supports the discharge code.

Tables 4A and **4B** reflect the sources of case ascertainment for targeted and non-targeted, reportable conditions. According to these tables, physician reporting was the sole source of information for 16% of reports of fetal alcohol syndrome (FAS) and 12% of reports of ASDs (as indicated in tables as pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified), illustrating the necessity of direct physician reporting for accurate reporting of the prevalence of these conditions. Validation by a chart audit reviewer of cases of ASDs reported in Table 4A only occurs for children up to age eight (8).

Table 5 outlines the targeted condition categories reported by hospital discharge data where the condition was determined to be confirmed or probable based on information obtained during a chart audit. The ICD-9-CM codes listed on the hospital discharge data often represent conditions that may possibly be present, but require additional testing or information to accurately confirm or rule out. The final column "Confirmed or Probable Percentage" reflects the validity of the hospital discharge data reported by the hospitals by calculating the percentage of reported conditions that were determined to be

confirmed or probable after a chart audit was performed. From 2007-2011, only two conditions, Chromosomal and Genitourinary anomalies, demonstrated over 50% confirmed or probable cases out of all reported cases of the condition. Lower percentages of confirmed or probable conditions can be explained due to the low numbers of audited and reviewed conditions during the reporting period of July 2013-June 2014. A detailed description of the reason for these lower percentages can be found in the Program Development section of this report.

Table 6 includes the counts and rates (listed by race; rates calculated per 10,000 births) of confirmed and probable targeted conditions for children born to Indiana mothers during 2007 and 2011. The overall prevalence of birth defects in Indiana as presented in this table is an under representation due to the same reason given under **Table 5**.

Table 7 indicates the counts and rates (rates calculated per 10,000 births) sorted by maternal age by delivery of confirmed and probable cases of children with one of the three trisomy conditions (trisomy 13, trisomy 18 and trisomy 21) who were born to Indiana mothers during 2007 – 2011. Children with trisomy conditions have three, rather than the expected two, copies of chromosome—for example, children born with a third copy of chromosome 21 have Down syndrome, also called trisomy 21.

Table 8 shows the counts and rates (rates calculated per 10,000 births) of confirmed and probable conditions for children born to Indiana women during 2007-2011 for each county of Indiana. Within this table, any count less than or equal to 5 is indicated with an asterisk (*).

Table 9 shows the total number of children born to Indiana women in a homebirth setting based on birth certificate data. This table also includes the total number of infant deaths that occurred in the homebirth population and the number of children from the homebirth population that were reported with a birth defect for each specific birth year.

Use of Indiana Birth Defects and Problems Registry Data

Annual data for births to Indiana mothers that occurred during the reporting period specified by the CDC (2007 – 2011) is contained in Table 6 and is typically submitted annually to the National Birth Defects Prevention Network (NBDPN), where the data is published in *Birth Defects Research Part A: Clinical and Molecular Teratology*. However, due to program and application changes that occurred during 2013-2014 as discussed above, annual data was not sent to the NBDPN in 2014. It is expected that the program will resume sending annual data in 2015. Data from IBDPR was not utilized by any researchers during this reporting period.

Proposals for the Prevention of Birth Defects and Problems in Indiana

Currently, the IBDPR contains a total of nine years worth of information on birth defect rates within the state. Data collected over a longer period of time is necessary to

accurately evaluate the presence of trends and/or clusters and, therefore, the need for specific prevention campaigns.

Table 1: Number of Children* Reported to IBDPR by Birth Year**

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Adenoma of lung or bronchus	212.30	1	2		1	
Anomalies of jaw	524.00 - 524.10	72	75	84	69	85
Anterior horn cell disease	335.00 - 335.99	12	15	3	3	7
Cardiovascular anomalies (Congenital)	745.00 - 747.99	2242	2278	2319	2329	2353
Central nervous system anomalies (Congenital)	740.00 - 742.99	426	451	418	381	358
Cerebral degenerations usually manifesting in childhood	330.00 - 330.99	11	7	2	6	7
Chromosomal anomalies	758.00 - 758.99	273	324	281	326	299
Coagulation defects	286.00 - 286.99	94	103	111	58	40
Congenital infections	771.0 - 771.99	583	608	602	543	530
Congenital nystagmus	379.51	7	15	6	6	7
Constitutional aplastic anemia	284.00 - 284.09	1	2	1	1	4
Cortical blindness	377.75	5	7	4	1	5
Diabetes mellitus	250.00 - 250.99	224	187	88	67	50
Dyshormonogenic goiter	246.10			1	1	
Fetal alcohol syndrome	760.71	47	39	25	18	12
Fetus or newborn affected by maternal anticonvulsants	760.77		2		1	
Fetus or newborn affected by maternal infection	760.20	5	7	8	2	3

*Whose mothers were Indiana residents at the time of child's birth

**Includes hospital discharge data and physician reports

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Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Gastrointestinal anomalies (Congenital)	750.30 - 751.99	587	509	541	522	499
Genitourinary anomalies (Congenital)	752.00 - 753.99	1728	1727	1680	1735	1702
Glaucoma of childhood	365.14	1			1	
Hearing loss	389.00 - 389.99	747	908	944	871	762
Hereditary hemolytic anemias	282.00 - 282.99	187	245	209	201	212
Hereditary retinal dystrophies	362.70 - 362.74	1				1
Immune mechanism disorders	279.00 - 279.99	99	84	101	92	70
Inguinal hernia	550.00 - 550.99	125	113	98	141	138
Integument anomalies (Congenital)	757.00 - 757.99	1677	2192	2330	2117	1829
Mesothelioma of peritoneum	211.80	2	1		1	
Mucopolysaccharidoses	277.50	1	2			2
Muscular dystrophies	359.00 - 359.99	28	47	26	19	34
Musculoskeletal anomalies (Congenital)	754.00 - 756.99	2046	2127	2185	2144	2163
Neoplasms	140.00 - 208.99, 216.00 - 216.99, 230.00 - 239.99	509	525	583	528	438
Orofacial anomalies (Congenital)	743.00 - 744.99, 749.00 - 750.29	1021	1139	1188	1210	1219
Other & unspecified anomalies (Congenital)	759.00 - 759.99	285	329	304	306	252
Other specified diseases of blood and blood-forming organs	289.80 - 289.89	17	23	28	15	21

*Whose mothers were Indiana residents at the time of child's birth
**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:51:19 PM

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Paraproteinemias, other	273.20		1			
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	299.00 - 299.99	451	439	336	221	87
Primary thrombocytopenia	287.30		4	5	2	1
Respiratory anomalies (Congenital)	748.00 - 748.99	472	521	528	481	443
Retrolental fibroplasia	362.21	213	113	50	2	7
Strabismus & other disorders of binocular eye movement	378.00 - 378.99	142	153	142	128	125
Testicular dysfunction, other	257.80		1			
Thyroid-binding globulin deficiency	246.80				1	1
Torsion of testes	608.20 - 608.24	1	5	3	2	6
Umbilical hernia	553.10	68	70	71	90	77
Visual impairment	368.00 - 368.45	4	7	4	7	6
White blood cell diseases	288.00 - 288.99	1017	990	909	896	729

*Whose mothers were Indiana residents at the time of child's birth
**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:51:19 PM

Table 2: Number of Children* Reported ** to IBDPR with Only One Reportable Condition by Birth Year

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Anomalies of jaw	524.00 - 524.10	10	16	7	10	9
Anterior horn cell disease	335.00 - 335.99	2	4	1	1	
Cardiovascular anomalies (Congenital)	745.00 - 747.99	725	719	721	786	761
Central nervous system anomalies (Congenital)	740.00 - 742.99	130	117	123	113	115
Cerebral degenerations usually manifesting in childhood	330.00 - 330.99	2	1	1	1	2
Chromosomal anomalies	758.00 - 758.99	46	58	49	46	48
Coagulation defects	286.00 - 286.99	11	18	15	15	9
Congenital infections	771.0 - 771.99	9	7	5		16
Congenital nystagmus	379.51	3	6	1	4	
Constitutional aplastic anemia	284.00 - 284.09				1	2
Diabetes mellitus	250.00 - 250.99	116	118	56	37	32
Fetal alcohol syndrome	760.71	23	21	8	4	4
Gastrointestinal anomalies (Congenital)	750.30 - 751.99	302	243	274	249	280
Genitourinary anomalies (Congenital)	752.00 - 753.99	816	820	875	996	1012
Hearing loss	389.00 - 389.99	403	491	518	500	423
Hereditary hemolytic anemias	282.00 - 282.99	116	134	122	127	122
Immune mechanism disorders	279.00 - 279.99	37	34	31	26	21

*Whose mothers were Indiana residents at the time of child's birth

**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:52:03 PM

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Inguinal hernia	550.00 - 550.99		2	10	20	30
Integument anomalies (Congenital)	757.00 - 757.99	1284	1676	1690	1679	1431
Muscular dystrophies	359.00 - 359.99	6	6	5	5	3
Musculoskeletal anomalies (Congenital)	754.00 - 756.99	1163	1187	1240	1260	1261
Neoplasms	140.00 - 208.99, 216.00 - 216.99, 230.00 - 239.99	202	225	224	239	163
Orofacial anomalies (Congenital)	743.00 - 744.99, 749.00 - 750.29	608	721	712	781	831
Other & unspecified anomalies (Congenital)	759.00 - 759.99	82	81	81	90	65
Other specified diseases of blood and blood-forming organs	289.80 - 289.89	4	11	7	7	7
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	299.00 - 299.99	262	245	188	130	51
Primary thrombocytopenia	287.30		4	2	1	
Respiratory anomalies (Congenital)	748.00 - 748.99	167	178	170	173	169
Retrolental fibroplasia	362.21	34	16			1
Strabismus & other disorders of binocular eye movement	378.00 - 378.99	57	67	69	48	56
Torsion of testes	608.20 - 608.24					2

*Whose mothers were Indiana residents at the time of child's birth

**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:52:03 PM

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Umbilical hernia	553.10	2	1	5	11	13
White blood cell diseases	288.00 - 288.99	586	608	525	572	448

*Whose mothers were Indiana residents at the time of child's birth
**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:52:03 PM

Table 3: Number of Children* Reported to IBDPR with More Than One Reportable Condition by Birth Year**

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Adenoma of lung or bronchus	212.30	1	2		1	
Anomalies of jaw	524.00 - 524.10	62	59	77	59	76
Anterior horn cell disease	335.00 - 335.99	10	11	2	2	7
Cardiovascular anomalies (Congenital)	745.00 - 747.99	1515	1559	1598	1543	1592
Central nervous system anomalies (Congenital)	740.00 - 742.99	296	334	295	268	243
Cerebral degenerations usually manifesting in childhood	330.00 - 330.99	9	6	1	5	5
Chromosomal anomalies	758.00 - 758.99	227	266	232	280	251
Coagulation defects	286.00 - 286.99	83	85	96	43	31
Congenital infections	771.0 - 771.99	574	601	597	543	514
Congenital nystagmus	379.51	4	9	5	2	7
Constitutional aplastic anemia	284.00 - 284.09	1	2	1		2
Cortical blindness	377.75	5	7	4	1	5
Diabetes mellitus	250.00 - 250.99	108	69	32	30	18
Dyshormonogenic goiter	246.10			1	1	
Fetal alcohol syndrome	760.71	24	18	17	14	8
Fetus or newborn affected by maternal anticonvulsants	760.77		2		1	
Fetus or newborn affected by maternal infection	760.20	5	7	8	2	3

*Whose mothers were Indiana residents at the time of child's birth

**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:52:48 PM

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Gastrointestinal anomalies (Congenital)	750.30 - 751.99	285	266	267	273	219
Genitourinary anomalies (Congenital)	752.00 - 753.99	910	907	805	739	690
Glaucoma of childhood	365.14	1			1	
Hearing loss	389.00 - 389.99	343	417	426	371	339
Hereditary hemolytic anemias	282.00 - 282.99	71	111	87	74	90
Hereditary retinal dystrophies	362.70 - 362.74	1				1
Immune mechanism disorders	279.00 - 279.99	62	50	70	66	49
Inguinal hernia	550.00 - 550.99	125	111	88	121	108
Integument anomalies (Congenital)	757.00 - 757.99	392	516	640	438	398
Mesothelioma of peritoneum	211.80	2	1		1	
Mucopolysaccharidoses	277.50	1	2			2
Muscular dystrophies	359.00 - 359.99	22	41	21	14	31
Musculoskeletal anomalies (Congenital)	754.00 - 756.99	883	940	945	884	902
Neoplasms	140.00 - 208.99, 216.00 - 216.99, 230.00 - 239.99	306	300	359	289	275
Orofacial anomalies (Congenital)	743.00 - 744.99, 749.00 - 750.29	413	418	476	429	388
Other & unspecified anomalies (Congenital)	759.00 - 759.99	203	248	223	216	187
Other specified diseases of blood and blood-forming organs	289.80 - 289.89	13	12	21	8	14

*Whose mothers were Indiana residents at the time of child's birth
**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:52:48 PM

Condition Name / Category	ICD-9-CM Codes	2007	2008	2009	2010	2011
Paraproteinemias, other	273.20		1			
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	299.00 - 299.99	189	194	148	91	36
Primary thrombocytopenia	287.30			3	1	1
Respiratory anomalies (Congenital)	748.00 - 748.99	305	343	358	308	274
Retrolental fibroplasia	362.21	179	97	50	2	6
Strabismus & other disorders of binocular eye movement	378.00 - 378.99	85	86	73	80	69
Testicular dysfunction, other	257.80		1			
Thyroid-binding globulin deficiency	246.80				1	1
Torsion of testes	608.20 - 608.24	1	5	3	2	4
Umbilical hernia	553.10	66	69	66	79	64
Visual impairment	368.00 - 368.45	4	7	4	7	6
White blood cell diseases	288.00 - 288.99	430	382	384	324	281

*Whose mothers were Indiana residents at the time of child's birth
**Includes hospital discharge data and physician reports

Data compiled on 10/21/2014 1:52:48 PM

Table 4A: Sources of Case Ascertainment Data for Targeted Conditions of 2007 - 2011 Births to Indiana Women

Condition Name / Category	Reported by Physician Only	Reported by Hospital Only	Reported by Physician and Hospital	Total
Anencephaly	2	27	0	29
Anophthalmia/microphthalmia	2	57	0	59
Anotia/microtia	2	50	2	54
Aortic valve stenosis	0	139	0	139
Atrial septal defect	8	6127	2	6137
Atrioventricular septal defect	9	280	1	290
Biliary atresia	0	35	0	35
Bladder exstrophy	0	24	0	24
Choanal atresia	1	129	0	130
Cleft lip only (without cleft palate)	5	196	2	203
Cleft lip with cleft palate	13	458	5	476
Cleft palate only (without cleft lip)	3	509	6	518
Cloacal exstrophy	0	291	0	291
Clubfoot	4	945	3	952
Coarctation of aorta	0	357	1	358
Common truncus	0	27	1	28
Congenital cataract	1	49	1	51
Congenital posterior urethral valves	1	98	0	99
Craniosynostosis	14	2914	24	2952
Deletion 22 q11.2	1	38	2	41
Diaphragmatic hernia	0	172	0	172

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Condition Name / Category	Reported by Physician Only	Reported by Hospital Only	Reported by Physician and Hospital	Total
Double outlet right ventricle (DORV)	0	125	0	125
Ebstein's anomaly	0	34	0	34
Encephalocele	2	55	2	59
Esophageal atresia/tracheoesophageal fistula	0	156	4	160
Fetal alcohol syndrome	23	101	17	141
Gastroschisis	1	270	1	272
Holoprosencephaly	5	331	6	342
Hypoplastic left heart syndrome	0	125	0	125
Hypospadias	2	1778	5	1785
Interrupted aortic arch (IAA)	0	35	0	35
Limb deficiencies (reduction defects)	17	299	4	320
Omphalocele	0	36	1	37
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	198	1398	86	1682
Pulmonary valve atresia and stenosis	0	760	2	762
Rectal and large intestinal atresia/stenosis	0	240	3	243
Renal agenesis/hypoplasia	1	237	2	240
Single ventricle	0	80	0	80
Small intestinal atresia/stenosis	0	225	1	226
Spina bifida without anencephaly	17	450	22	489
Tetralogy of Fallot (TOF)	0	181	1	182

Data compiled on 10/21/2014 1:53:36 PM

Condition Name / Category	Reported by Physician Only	Reported by Hospital Only	Reported by Physician and Hospital	Total
Total anomalous pulmonary venous connection	0	51	0	51
Transposition of the great arteries	0	184	0	184
Tricuspid valve atresia and stenosis	0	56	0	56
Trisomy 13 (Patau syndrome)	0	40	0	40
Trisomy 18 (Edwards syndrome)	1	82	2	85
Trisomy 21 (Down syndrome)	4	532	69	605
Turner syndrome	2	39	1	42
Ventricular septal defect	3	2386	9	2398

Data compiled on 10/21/2014 1:53:36 PM

Table 4B: Sources of Case Ascertainment Data for Reportable Conditions* of 2007 - 2011 Births to Indiana Women

Condition Name / Category	Reported by Physician Only	Reported by Hospital Only	Reported by Physician and Hospital	Total
Adenoma of lung or bronchus	0	4	0	4
Anomalies of jaw	2	448	3	453
Anterior horn cell disease	0	57	1	58
Cardiovascular anomalies (Congenital)	26	10265	11	10302
Central nervous system anomalies (Congenital)	36	1827	17	1880
Cerebral degenerations usually manifesting in childhood	2	32	0	34
Chromosomal anomalies	209	826	30	1065
Coagulation defects	0	444	0	444
Congenital infections	0	3119	0	3119
Congenital nystagmus	3	37	1	41
Constitutional aplastic anemia	0	9	0	9
Cortical blindness	0	22	0	22
Diabetes mellitus	0	748	0	748
Dyshormonogenic goiter	1	1	0	2
Fetus or newborn affected by maternal anticonvulsants	0	3	0	3
Fetus or newborn affected by maternal infection	0	25	0	25
Gastrointestinal anomalies (Congenital)	1	2074	5	2080
Genitourinary anomalies (Congenital)	16	9245	8	9269

*Excludes targeted conditions

Data compiled on 10/21/2014 1:54:24 PM

Condition Name / Category	Reported by Physician Only	Reported by Hospital Only	Reported by Physician and Hospital	Total
Glaucoma of childhood	2	0	0	2
Hearing loss	18	4853	4	4875
Hereditary hemolytic anemias	4	1315	1	1320
Hereditary retinal dystrophies	0	2	0	2
Immune mechanism disorders	3	539	2	544
Inguinal hernia	0	652	0	652
Integument anomalies (Congenital)	10	10580	4	10594
Mesothelioma of peritoneum	0	4	0	4
Mucopolysaccharidoses	0	5	0	5
Muscular dystrophies	6	180	2	188
Musculoskeletal anomalies (Congenital)	78	8434	33	8545
Neoplasms	6	3535	0	3541
Orofacial anomalies (Congenital)	52	5288	8	5348
Other & unspecified anomalies (Congenital)	75	1548	32	1655
Other specified diseases of blood and blood-forming organs	1	103	0	104
Paraproteinemias, other	1	0	0	1
Primary thrombocytopenia	0	12	0	12
Respiratory anomalies (Congenital)	5	2444	4	2453
Retrolental fibroplasia	0	391	0	391
Strabismus & other disorders of binocular eye movement	9	790	0	799
Testicular dysfunction, other	0	1	0	1

*Excludes targeted conditions

Data compiled on 10/21/2014 1:54:24 PM

Condition Name / Category	Reported by Physician Only	Reported by Hospital Only	Reported by Physician and Hospital	Total
Thyroid-binding globulin deficiency	0	2	0	2
Torsion of testes	0	17	0	17
Umbilical hernia	0	376	0	376
Visual impairment	0	28	0	28
White blood cell diseases	0	4904	0	4904

*Excludes targeted conditions

Data compiled on 10/21/2014 1:54:24 PM

Table 5: Targeted Conditions Reported to IBDPR via Hospital Discharge Data for Children Born in 2007 - 2011 which are Confirmed or Determined as Probable by Medical Chart Audits or Physician Reports

Condition Name / Category	Number of Children Reported	Targeted Conditions Reported	Conditions per Child	Confirmed or Probable Conditions	Confirmed or Probable Percentage
Cardiovascular anomalies (Congenital)	8009	11105	1	3647	32.84
Central nervous system anomalies (Congenital)	618	893	1	244	27.32
Chromosomal anomalies	794	805	1	414	51.43
Fetal alcohol syndrome	118	118	1	56	47.46
Gastrointestinal anomalies (Congenital)	818	955	1	324	33.93
Genitourinary anomalies (Congenital)	2110	2144	1	1156	53.92
Musculoskeletal anomalies (Congenital)	4361	4693	1	548	11.68
Orofacial anomalies (Congenital)	851	1336	2	509	38.10
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	1367	1484	1	330	22.24
Respiratory anomalies (Congenital)	129	129	1	47	36.43

Data compiled on 10/21/2014 1:55:08 PM

Table 6: Confirmed and Probable Counts and Rates by Race of the Targeted Conditions for 2007 - 2011 Births to Indiana Women

Defect	Non-Hispanic White	Non-Hispanic Black	Hispanic	Asian or Pacific Islander	American Indian or Alaskan Native	Other / Unknown	Total
Anencephaly	2	2	1	1	0	0	6
	0.06	0.39	0.27	0.39	0	0	0.14
Anophthalmia/microphthalmia	19	2	2	2	0	0	25
	0.62	0.39	0.54	0.77	0	0	0.58
Anotia/microtia	24	3	2	1	0	1	31
	0.78	0.58	0.54	0.39	0	1.61	0.72
Aortic valve stenosis	37	4	4	1	0	0	46
	1.20	0.78	1.08	0.39	0	0	1.07
Atrial septal defect	1099	197	120	71	2	31	1520
	35.61	38.36	32.41	27.35	29.41	49.87	35.36
Atrioventricular septal defect	92	12	5	5	1	3	118
	2.98	2.34	1.35	1.93	14.71	4.83	2.74
Biliary atresia	10	6	2	1	0	0	19
	0.32	1.17	0.54	0.39	0	0	0.44
Bladder exstrophy	13	1	1	0	0	0	15
	0.42	0.19	0.27	0	0	0	0.35
Choanal atresia	41	1	3	1	0	2	48
	1.33	0.19	0.81	0.39	0	3.22	1.12
Cleft lip only (without cleft palate)	90	6	4	1	1	0	102
	2.92	1.17	1.08	0.39	14.71	0	2.37
Cleft lip with cleft palate	128	15	20	8	0	1	172
	4.15	2.92	5.40	3.08	0	1.61	4
Cleft palate only (without cleft lip)	154	16	11	6	0	2	189
	4.99	3.12	2.97	2.31	0	3.22	4.40
Cloacal exstrophy	13	0	2	0	0	0	15
	0.42	0	0.54	0	0	0	0.35
Clubfoot	84	16	5	4	0	3	112
	2.72	3.12	1.35	1.54	0	4.83	2.61
Coarctation of aorta	116	11	15	6	1	2	151

Note 1—Rates based on fewer than 20 cases are unstable and are not comparable.
 Note 2—Race is assigned to the child based on the mother's reporting about herself.
 Note 3—Rates per 10,000 live births displayed in shaded area.

Data compiled on 10/21/2014 1:57:06 PM

Defect	Non-Hispanic White	Non-Hispanic Black	Hispanic	Asian or Pacific Islander	American Indian or Alaskan Native	Other / Unknown	Total
	3.76	2.14	4.05	2.31	14.71	3.22	3.51
Common truncus	13	1	1	0	0	0	15
	0.42	0.19	0.27	0	0	0	0.35
Congenital cataract	14	5	1	2	0	1	23
	0.45	0.97	0.27	0.77	0	1.61	0.54
Congenital posterior urethral valves	15	3	0	1	1	0	20
	0.49	0.58	0	0.39	14.71	0	0.47
Craniosynostosis	71	7	7	4	0	0	89
	2.30	1.36	1.89	1.54	0	0	2.07
Deletion 22 q11.2	9	0	2	0	0	0	11
	0.29	0	0.54	0	0	0	0.26
Diaphragmatic hernia	67	12	15	2	0	1	97
	2.17	2.34	4.05	0.77	0	1.61	2.26
Double outlet right ventricle (DORV)	47	7	2	0	0	3	59
	1.52	1.36	0.54	0	0	4.83	1.37
Ebstein's anomaly	16	0	1	1	0	0	18
	0.52	0	0.27	0.39	0	0	0.42
Encephalocele	22	1	3	2	0	0	28
	0.71	0.19	0.81	0.77	0	0	0.65
Esophageal atresia/tracheoesophageal fistula	63	5	11	1	1	0	81
	2.04	0.97	2.97	0.39	14.71	0	1.88
Fetal alcohol syndrome	49	16	6	14	0	0	85
	1.59	3.12	1.62	5.39	0	0	1.98
Gastroschisis	121	20	16	2	0	4	163
	3.92	3.89	4.32	0.77	0	6.44	3.79
Holoprosencephaly	82	13	10	3	0	1	109
	2.66	2.53	2.70	1.16	0	1.61	2.54
Hypoplastic left heart syndrome	48	7	5	3	0	1	64
	1.56	1.36	1.35	1.16	0	1.61	1.49
Hypospadias	816	97	45	34	0	13	1005

Note 1—Rates based on fewer than 20 cases are unstable and are not comparable.
Note 2—Race is assigned to the child based on the mother's reporting about herself.
Note 3—Rates per 10,000 live births displayed in shaded area.

Data compiled on 10/21/2014 1:57:06 PM

Defect	Non-Hispanic White	Non-Hispanic Black	Hispanic	Asian or Pacific Islander	American Indian or Alaskan Native	Other / Unknown	Total
	26.44	18.89	12.15	13.10	0	20.91	23.38
Interrupted aortic arch (IAA)	7	0	2	1	0	0	10
	0.23	0	0.54	0.39	0	0	0.23
Limb deficiencies (reduction defects)	91	11	15	1	0	1	119
	2.95	2.14	4.05	0.39	0	1.61	2.77
Omphalocele	12	4	1	1	0	0	18
	0.39	0.78	0.27	0.39	0	0	0.42
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	449	69	36	23	2	5	584
	14.55	13.43	9.72	8.86	29.41	8.04	13.58
Pulmonary valve atresia and stenosis	158	35	15	7	0	4	219
	5.12	6.81	4.05	2.70	0	6.44	5.09
Rectal and large intestinal atresia/stenosis	106	11	19	4	1	1	142
	3.43	2.14	5.13	1.54	14.71	1.61	3.30
Renal agenesis/hypoplasia	92	10	13	5	0	1	121
	2.98	1.95	3.51	1.93	0	1.61	2.81
Single ventricle	13	3	0	0	0	0	16
	0.42	0.58	0	0	0	0	0.37
Small intestinal atresia/stenosis	46	5	11	2	0	4	68
	1.49	0.97	2.97	0.77	0	6.44	1.58
Spina bifida without anencephaly	116	14	10	1	0	3	144
	3.76	2.73	2.70	0.39	0	4.83	3.35
Tetralogy of Fallot (TOF)	69	10	10	2	0	2	93
	2.24	1.95	2.70	0.77	0	3.22	2.16
Total anomalous pulmonary venous connection	20	5	3	0	0	0	28

Note 1—Rates based on fewer than 20 cases are unstable and are not comparable.
Note 2—Race is assigned to the child based on the mother's reporting about herself.
Note 3—Rates per 10,000 live births displayed in shaded area.

Data compiled on 10/21/2014 1:57:06 PM

Defect	Non-Hispanic White	Non-Hispanic Black	Hispanic	Asian or Pacific Islander	American Indian or Alaskan Native	Other / Unknown	Total
	0.65	0.97	0.81	0	0	0	0.65
Transposition of the great arteries	62	11	5	0	0	3	81
	2.01	2.14	1.35	0	0	4.83	1.88
Tricuspid valve atresia and stenosis	19	4	2	0	0	0	25
	0.62	0.78	0.54	0	0	0	0.58
Trisomy 13 (Patau syndrome)	7	2	4	0	0	1	14
	0.23	0.39	1.08	0	0	1.61	0.33
Trisomy 18 (Edwards syndrome)	28	8	5	2	0	1	44
	0.91	1.56	1.35	0.77	0	1.61	1.02
Trisomy 21 (Down syndrome)	267	34	42	16	2	8	369
	8.65	6.62	11.34	6.16	29.41	12.87	8.58
Turner syndrome	8	0	1	1	0	0	10
	0.26	0	0.27	0.39	0	0	0.23
Ventricular septal defect	912	110	101	40	0	21	1184
	29.55	21.42	27.28	15.41	0	33.78	27.54
All Defects	5857	832	617	283	12	124	7725
	189.77	161.99	166.62	109	176.47	199.49	179.70
Total Live Births	308639	51362	37030	25964	680	6216	429891

Note 1—Rates based on fewer than 20 cases are unstable and are not comparable.
Note 2—Race is assigned to the child based on the mother's reporting about herself.
Note 3—Rates per 10,000 live births displayed in shaded area.

Data compiled on 10/21/2014 1:57:06 PM

Table 7: Confirmed and Probable Counts and Rates of Trisomy by Maternal Age for 2007 - 2011 Births to Indiana Women (Rates per 10,000 live births displayed in the shaded area.)

Defect	< 20	20-24	25-29	30-34	35-39	40+	Unknown	Total
Trisomy 13 (Patau syndrome)	0	3	2	7	2	0	0	14
	0	0.26	0.15	0.77	0.53	0	0	0.33
Trisomy 21 (Down syndrome)	25	42	70	83	79	70	0	369
	5.58	3.60	5.38	9.18	21.01	69.90	0	8.58
Trisomy 18 (Edwards syndrome)	5	4	10	8	.8	9	0	44
	1.12	0.34	0.77	0.89	2.13	8.99	0	1.02
<hr/>								
Total Live Births	44830	116814	130117	90392	37598	10014	126	429891

Note—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:02 PM

Table 8: Confirmed and Probable Counts and Rates of Targeted Conditions for 2007 - 2011 Births to Indiana Women by County (rates per 10,000 births)

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
ADAMS	3281			ADAMS	3281		
All Defects		53	161.54	Trisomy 21 (Down syndrome)		5	15.24
Atrial septal defect		9	27.43	Turner syndrome		*	
Atrioventricular septal defect		*		Ventricular septal defect		6	18.29
Cleft lip with cleft palate		*					
Cleft palate only (without cleft lip)		*					
Clubfoot		*					
Coarctation of aorta		*					
Common truncus		*					
Congenital posterior urethral valves		*					
Diaphragmatic hernia		*					
Hypospadias		5	15.24				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		8	24.38				
Pulmonary valve atresia and stenosis		*					
Renal agenesis/hypoplasia		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
ALLEN	26902			ALLEN	26902		
All Defects		356	132.33	Omphalocele		*	
Anotia/microtia		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		50	18.59
Atrial septal defect		79	29.37	Pulmonary valve atresia and stenosis		14	5.2
Atrioventricular septal defect		5	1.86	Rectal and large intestinal atresia/stenosis		8	2.97
Choanal atresia		*		Renal agenesis/hypoplasia		5	1.86
Cleft lip only (without cleft palate)		*		Small intestinal atresia/stenosis		*	
Cleft lip with cleft palate		7	2.6	Spina bifida without anencephaly		7	2.6
Cleft palate only (without cleft lip)		8	2.97	Tetralogy of Fallot (TOF)		*	
Clubfoot		6	2.23	Total anomalous pulmonary venous connection		*	
Coarctation of aorta		*		Transposition of the great arteries		*	
Congenital cataract		*		Tricuspid valve atresia and stenosis		*	
Congenital posterior urethral valves		*		Trisomy 21 (Down syndrome)		11	4.09
Craniosynostosis		6	2.23	Ventricular septal defect		35	13.01
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		18	6.69				
Gastroschisis		*					
Holoprosencephaly		5	1.86				
Hypoplastic left heart syndrome		*					
Hypospadias		44	16.36				
Limb deficiencies (reduction defects)		6	2.23				

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
BARTHOLOMEW	5223			BARTHOLOMEW	5223		
All Defects		93	178.06	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		5	9.57
Anencephaly		*		Pulmonary valve atresia and stenosis		*	
Aortic valve stenosis		*		Rectal and large intestinal atresia/stenosis		*	
Atrial septal defect		17	32.55	Renal agenesis/hypoplasia		*	
Atrioventricular septal defect		*		Small intestinal atresia/stenosis		*	
Bladder exstrophy		*		Spina bifida without anencephaly		*	
Choanal atresia		*		Tetralogy of Fallot (TOF)		*	
Cleft lip only (without cleft palate)		*		Transposition of the great arteries		*	
Cleft lip with cleft palate		*		Tricuspid valve atresia and stenosis		*	
Cloacal exstrophy		*		Trisomy 13 (Patau syndrome)		*	
Coarctation of aorta		*		Trisomy 18 (Edwards syndrome)		*	
Common truncus		*		Trisomy 21 (Down syndrome)		*	
Craniosynostosis		*		Ventricular septal defect		18	34.46
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Ebstein's anomaly		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypospadias		*					
Limb deficiencies (reduction defects)		*					
Omphalocele		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
BENTON	509						
All Defects		8	157.17				
Atrial septal defect		*					
Atrioventricular septal defect		*					
Encephalocele		*					
Limb deficiencies (reduction defects)		*					
Pulmonary valve atresia and stenosis		*					
Ventricular septal defect		*					
BLACKFORD	743						
All Defects		19	255.72				
Atrial septal defect		7	94.21				
Cleft lip with cleft palate		*					
Diaphragmatic hernia		*					
Hypoplastic left heart syndrome		*					
Hypospadias		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Renal agenesis/hypoplasia		*					
Ventricular septal defect		5	67.29				

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
BOONE	3519			BOONE	3519		
All Defects		75	213.13	Total anomalous pulmonary venous connection		*	
Atrial septal defect		11	31.26	Trisomy 21 (Down syndrome)		*	
Atrioventricular septal defect		*		Ventricular septal defect		9	25.58
Bladder exstrophy		*		BROWN	631		
Cleft lip with cleft palate		*		All Defects		9	142.63
Cleft palate only (without cleft lip)		*		Anophthalmia/microphthalmia		*	
Cloacal exstrophy		*		Atrial septal defect		*	
Clubfoot		*		Diaphragmatic hernia		*	
Coarctation of aorta		*		Spina bifida without anencephaly		*	
Deletion 22 q11.2		*		Trisomy 21 (Down syndrome)		*	
Encephalocele		*		Ventricular septal defect		*	
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		18	51.15				
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		7	19.89				
Pulmonary valve atresia and stenosis		5	14.21				
Rectal and large intestinal atresia/stenosis		*					
Renal agenesis/hypoplasia		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total	Rate	
CARROLL	1099						
All Defects		24	218.38				
Aortic valve stenosis		*					
Atrial septal defect		*					
Atrioventricular septal defect		*					
Cleft lip only (without cleft palate)		*					
Coarctation of aorta		*					
Ebstein's anomaly		*					
Gastroschisis		*					
Hypospadias		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					
Ventricular septal defect		8	72.79				

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect	Total	Rate		Defect	Total	Rate	
CASS	2608			CASS	2608		
All Defects	63	241.56		Spina bifida without anencephaly	*		
Atrial septal defect	9	34.51		Transposition of the great arteries	*		
Choanal atresia	*			Trisomy 21 (Down syndrome)	5	19.17	
Cleft lip only (without cleft palate)	*			Ventricular septal defect	16	61.35	
Cleft palate only (without cleft lip)	*						
Clubfoot	*			CLARK	7298		
Coarctation of aorta	*			All Defects	58	79.47	
Common truncus	*			Atrial septal defect	19	26.03	
Diaphragmatic hernia	*			Cleft lip with cleft palate	*		
Double outlet right ventricle (DORV)	*			Clubfoot	*		
Gastroschisis	*			Common truncus	*		
Holoprosencephaly	*			Craniosynostosis	*		
Hypospadias	*			Fetal alcohol syndrome	*		
Interrupted aortic arch (IAA)	*			Hypospadias	7	9.59	
Limb deficiencies (reduction defects)	*			Limb deficiencies (reduction defects)	*		
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*			Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*		
Pulmonary valve atresia and stenosis	*			Pulmonary valve atresia and stenosis	*		
Rectal and large intestinal atresia/stenosis	*			Rectal and large intestinal atresia/stenosis	*		
Small intestinal atresia/stenosis	*			Renal agenesis/hypoplasia	*		
				Trisomy 21 (Down syndrome)	*		
				Ventricular septal defect	16	21.92	

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
CLAY	1554			CLINTON	2387		
All Defects		47	302.45	All Defects		50	209.47
Atrial septal defect		8	51.48	Atrial septal defect		12	50.27
Cleft lip only (without cleft palate)		*		Atrioventricular septal defect		*	
Cleft lip with cleft palate		*		Clubfoot		*	
Cleft palate only (without cleft lip)		*		Coarctation of aorta		*	
Coarctation of aorta		*		Diaphragmatic hernia		*	
Craniosynostosis		*		Esophageal atresia/tracheoesophageal fistula		*	
Gastroschisis		*		Gastroschisis		*	
Hypospadias		7	45.05	Hypospadias		8	33.51
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		5	32.18	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Pulmonary valve atresia and stenosis		*		Pulmonary valve atresia and stenosis		*	
Renal agenesis/hypoplasia		*		Rectal and large intestinal atresia/stenosis		*	
Tetralogy of Fallot (TOF)		*		Renal agenesis/hypoplasia		*	
Turner syndrome		*		Small intestinal atresia/stenosis		*	
Ventricular septal defect		10	64.35	Total anomalous pulmonary venous connection		*	
				Trisomy 21 (Down syndrome)		*	
				Ventricular septal defect		8	33.51

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
CRAWFORD	590			DAVIESS	2662		
All Defects		6	101.69	All Defects		51	191.59
Atrial septal defect		*		Atrial septal defect		9	33.81
Common truncus		*		Atrioventricular septal defect		*	
Spina bifida without anencephaly		*		Bladder exstrophy		*	
Ventricular septal defect		*		Cleft lip with cleft palate		*	
				Cleft palate only (without cleft lip)		*	
				Clubfoot		*	
				Coarctation of aorta		*	
				Fetal alcohol syndrome		*	
				Hypoplastic left heart syndrome		*	
				Hypospadias		6	22.54
				Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
				Rectal and large intestinal atresia/stenosis		*	
				Renal agenesis/hypoplasia		*	
				Spina bifida without anencephaly		*	
				Transposition of the great arteries		*	
				Tricuspid valve atresia and stenosis		*	
				Trisomy 21 (Down syndrome)		5	18.78
				Ventricular septal defect		9	33.81

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
DEARBORN	1828			DE KALB	2687		
All Defects		10	54.7	All Defects		44	163.75
Atrioventricular septal defect		*		Anophthalmia/microphthalmia		*	
Cleft lip only (without cleft palate)		*		Atrial septal defect		8	29.77
Hypospadias		5	27.35	Cleft palate only (without cleft lip)		*	
Turner syndrome		*		Clubfoot		*	
Ventricular septal defect		*		Craniosynostosis		*	
				Esophageal atresia/tracheoesophageal fistula		*	
DECATUR	1611			Fetal alcohol syndrome		*	
All Defects		29	180.01	Holoprosencephaly		*	
Atrial septal defect		8	49.66	Hypospadias		6	22.33
Atrioventricular septal defect		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		11	40.94
Cleft palate only (without cleft lip)		*		Pulmonary valve atresia and stenosis		*	
Craniosynostosis		*		Rectal and large intestinal atresia/stenosis		*	
Esophageal atresia/tracheoesophageal fistula		*		Spina bifida without anencephaly		*	
Gastroschisis		*		Tricuspid valve atresia and stenosis		*	
Hypospadias		*		Ventricular septal defect		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Rectal and large intestinal atresia/stenosis		*					
Renal agenesis/hypoplasia		*					
Small intestinal atresia/stenosis		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
DELAWARE	6470			DELAWARE	6470		
All Defects		196	302.94	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	14		21.64
Anencephaly		*		Pulmonary valve atresia and stenosis	*		
Atrial septal defect		62	95.83	Rectal and large intestinal atresia/stenosis	*		
Atrioventricular septal defect		*		Renal agenesis/hypoplasia	*		
Biliary atresia		*		Small intestinal atresia/stenosis	*		
Bladder exstrophy		*		Spina bifida without anencephaly	*		
Choanal atresia		*		Total anomalous pulmonary venous connection	*		
Cleft lip with cleft palate		*		Transposition of the great arteries	*		
Cleft palate only (without cleft lip)		*		Tricuspid valve atresia and stenosis	*		
Clubfoot		*		Trisomy 21 (Down syndrome)	8		12.36
Coarctation of aorta		*		Ventricular septal defect	31		47.91
Craniosynostosis		*					
Diaphragmatic hernia		*					
Ebstein's anomaly		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		20	30.91				
Limb deficiencies (reduction defects)		5	7.73				
Omphalocele		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total	Rate	
DUBOIS	2642						
All Defects		30	113.55				
Anotia/microtia		*					
Aortic valve stenosis		*					
Atrial septal defect		*					
Cleft lip with cleft palate		*					
Cleft palate only (without cleft lip)		*					
Craniosynostosis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		5	18.93				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Rectal and large intestinal atresia/stenosis		*					
Renal agenesis/hypoplasia		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					
Transposition of the great arteries		*					
Turner syndrome		*					
Ventricular septal defect		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
ELKHART	16090			ELKHART	16090		
All Defects		257	159.73	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		21	13.05
Aortic valve stenosis		*		Pulmonary valve atresia and stenosis		7	4.35
Atrial septal defect		46	28.59	Rectal and large intestinal atresia/stenosis		*	
Atrioventricular septal defect		*		Renal agenesis/hypoplasia		7	4.35
Cleft lip only (without cleft palate)		6	3.73	Single ventricle		*	
Cleft lip with cleft palate		5	3.11	Small intestinal atresia/stenosis		*	
Cleft palate only (without cleft lip)		8	4.97	Spina bifida without anencephaly		7	4.35
Cloacal exstrophy		*		Tetralogy of Fallot (TOF)		*	
Clubfoot		6	3.73	Total anomalous pulmonary venous connection		*	
Coarctation of aorta		7	4.35	Transposition of the great arteries		*	
Congenital cataract		*		Trisomy 13 (Patau syndrome)		*	
Craniosynostosis		*		Trisomy 18 (Edwards syndrome)		*	
Diaphragmatic hernia		5	3.11	Trisomy 21 (Down syndrome)		10	6.22
Double outlet right ventricle (DORV)		*		Ventricular septal defect		27	16.78
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		10	6.22				
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		43	26.72				
Limb deficiencies (reduction defects)		*					
Omphalocele		*					

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County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
FAYETTE	1221			FLOYD	4452		
All Defects		29	237.51	All Defects		41	92.09
Aortic valve stenosis		*		Atrial septal defect		11	24.71
Atrial septal defect		*		Cleft lip with cleft palate		*	
Atrioventricular septal defect		*		Cleft palate only (without cleft lip)		*	
Cleft lip only (without cleft palate)		*		Clubfoot		*	
Cleft lip with cleft palate		*		Hypospadias		5	11.23
Clubfoot		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Coarctation of aorta		*		Pulmonary valve atresia and stenosis		5	11.23
Craniosynostosis		*		Rectal and large intestinal atresia/stenosis		*	
Diaphragmatic hernia		*		Trisomy 21 (Down syndrome)		*	
Esophageal atresia/tracheoesophageal fistula		*		Ventricular septal defect		11	24.71
Gastroschisis		*					
Holoprosencephaly		*					
Hypospadias		7	57.33				
Limb deficiencies (reduction defects)		*					
Rectal and large intestinal atresia/stenosis		*					
Renal agenesis/hypoplasia		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
FOUNTAIN	994			FULTON	1309		
All Defects		28	281.69	All Defects		23	175.71
Aortic valve stenosis		*		Atrial septal defect		*	
Atrial septal defect		8	80.48	Biliary atresia		*	
Cleft palate only (without cleft lip)		*		Cleft lip with cleft palate		*	
Holoprosencephaly		*		Coarctation of aorta		*	
Hypoplastic left heart syndrome		*		Craniosynostosis		*	
Hypospadias		*		Double outlet right ventricle (DORV)		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Fetal alcohol syndrome		*	
Pulmonary valve atresia and stenosis		*		Hypospadias		*	
Rectal and large intestinal atresia/stenosis		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Ventricular septal defect		7	70.42	Pulmonary valve atresia and stenosis		*	
				Rectal and large intestinal atresia/stenosis		*	
FRANKLIN	660			Renal agenesis/hypoplasia		*	
All Defects		11	166.67	Small intestinal atresia/stenosis		*	
Atrial septal defect		*		Spina bifida without anencephaly		*	
Coarctation of aorta		*		Tetralogy of Fallot (TOF)		*	
Gastroschisis		*		Trisomy 21 (Down syndrome)		*	
Hypospadias		*		Ventricular septal defect		*	
Transposition of the great arteries		*					
Tricuspid valve atresia and stenosis		*					
Ventricular septal defect		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
GIBSON	2062			GIBSON	2062		
All Defects		46	223.08	Renal agenesis/hypoplasia		*	
Anophthalmia/microphthalmia		*		Spina bifida without anencephaly		*	
Atrial septal defect		*		Tetralogy of Fallot (TOF)		*	
Bladder exstrophy		*		Trisomy 21 (Down syndrome)		*	
Choanal atresia		*		Ventricular septal defect		6	29.1
Cleft lip only (without cleft palate)		*					
Cleft lip with cleft palate		*					
Coarctation of aorta		*					
Double outlet right ventricle (DORV)		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		*					
Interrupted aortic arch (IAA)		*					
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Pulmonary valve atresia and stenosis		*					
Rectal and large intestinal atresia/stenosis		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
GRANT	4120			GRANT	4120		
All Defects		71	172.33	Small intestinal atresia/stenosis	*		
Anophthalmia/microphthalmia		*		Spina bifida without anencephaly	*		
Aortic valve stenosis		*		Tetralogy of Fallot (TOF)	*		
Atrial septal defect		10	24.27	Total anomalous pulmonary venous connection	*		
Atrioventricular septal defect		*		Trisomy 21 (Down syndrome)	*		
Cleft lip with cleft palate		*		Ventricular septal defect	9	21.84	
Cleft palate only (without cleft lip)		*					
Cloacal exstrophy		*					
Clubfoot		*					
Coarctation of aorta		*					
Diaphragmatic hernia		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		9	21.84				
Omphalocele		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		6	14.56				
Rectal and large intestinal atresia/stenosis		*					
Renal agenesis/hypoplasia		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect	Total	Rate		Defect	Total	Rate	
GREENE	1861						
All Defects	30	161.2					
Atrial septal defect	*						
Atrioventricular septal defect	*						
Cleft lip with cleft palate	*						
Cleft palate only (without cleft lip)	*						
Cloacal exstrophy	*						
Craniosynostosis	*						
Double outlet right ventricle (DORV)	*						
Holoprosencephaly	*						
Hypospadias	8	42.99					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*						
Rectal and large intestinal atresia/stenosis	*						
Small intestinal atresia/stenosis	*						
Tetralogy of Fallot (TOF)	*						
Ventricular septal defect	5	26.87					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
HAMILTON	19391			HAMILTON	19391		
All Defects		391	201.64	Interrupted aortic arch (IAA)	*		
Anophthalmia/microphthalmia		*		Limb deficiencies (reduction defects)	11		5.67
Anotia/microtia		*		Omphalocele	*		
Aortic valve stenosis		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	33		17.02
Atrial septal defect		60	30.94	Pulmonary valve atresia and stenosis	7		3.61
Atrioventricular septal defect		7	3.61	Rectal and large intestinal atresia/stenosis	6		3.09
Bladder exstrophy		*		Renal agenesis/hypoplasia	*		
Choanal atresia		*		Small intestinal atresia/stenosis	*		
Cleft lip only (without cleft palate)		9	4.64	Spina bifida without anencephaly	8		4.13
Cleft lip with cleft palate		8	4.13	Tetralogy of Fallot (TOF)	9		4.64
Cleft palate only (without cleft lip)		11	5.67	Transposition of the great arteries	*		
Clubfoot		*		Tricuspid valve atresia and stenosis	*		
Coarctation of aorta		8	4.13	Trisomy 13 (Patau syndrome)	*		
Congenital cataract		*		Trisomy 21 (Down syndrome)	21		10.83
Craniosynostosis		5	2.58	Ventricular septal defect	53		27.33
Diaphragmatic hernia		6	3.09				
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		5	2.58				
Hypoplastic left heart syndrome		6	3.09				
Hypospadias		83	42.8				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
HANCOCK	4095			HANCOCK	4095		
All Defects		81	197.8	Renal agenesis/hypoplasia		*	
Atrial septal defect		16	39.07	Small intestinal atresia/stenosis		*	
Atrioventricular septal defect		*		Spina bifida without anencephaly		*	
Choanal atresia		*		Tetralogy of Fallot (TOF)		*	
Cleft lip only (without cleft palate)		*		Total anomalous pulmonary venous connection		*	
Cleft palate only (without cleft lip)		*		Trisomy 18 (Edwards syndrome)		*	
Clubfoot		*		Trisomy 21 (Down syndrome)	6		14.65
Coarctation of aorta		*		Ventricular septal defect	13		31.75
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*		HARRISON	2223		
Ebstein's anomaly		*		All Defects		23	103.46
Encephalocele		*		Atrial septal defect		*	
Esophageal atresia/tracheoesophageal fistula		*		Cleft lip only (without cleft palate)		*	
Gastroschisis		*		Cleft lip with cleft palate		*	
Hypospadias	6		14.65	Hypospadias	8		35.99
Limb deficiencies (reduction defects)		*		Pulmonary valve atresia and stenosis		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Renal agenesis/hypoplasia		*	
Pulmonary valve atresia and stenosis		*		Trisomy 21 (Down syndrome)		*	
Rectal and large intestinal atresia/stenosis		*		Ventricular septal defect	8		35.99

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
HENDRICKS	9038			HENDRICKS	9038		
All Defects		171	189.2	Pulmonary valve atresia and stenosis		7	7.75
Aortic valve stenosis		*		Rectal and large intestinal atresia/stenosis		7	7.75
Atrial septal defect		31	34.3	Renal agenesis/hypoplasia		*	
Atrioventricular septal defect		*		Single ventricle		*	
Choanal atresia		*		Small intestinal atresia/stenosis		*	
Cleft lip only (without cleft palate)		*		Spina bifida without anencephaly		*	
Cleft lip with cleft palate		*		Tetralogy of Fallot (TOF)		*	
Cleft palate only (without cleft lip)		*		Total anomalous pulmonary venous connection		*	
Cloacal exstrophy		*		Transposition of the great arteries		*	
Coarctation of aorta		*		Trisomy 18 (Edwards syndrome)		*	
Common truncus		*		Trisomy 21 (Down syndrome)		14	15.49
Congenital posterior urethral valves		*		Ventricular septal defect		29	32.09
Craniosynostosis		*					
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Gastroschisis		6	6.64				
Holoprosencephaly		*					
Hypospadias		23	25.45				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		11	12.17				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
HENRY	2500			HENRY	2500		
All Defects		60	240	Ventricular septal defect		12	48
Atrial septal defect		13	52				
Atrioventricular septal defect		*					
Biliary atresia		*					
Choanal atresia		*					
Cleft lip only (without cleft palate)		*					
Cleft lip with cleft palate		*					
Cleft palate only (without cleft lip)		*					
Double outlet right ventricle (DORV)		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypospadias		9	36				
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Pulmonary valve atresia and stenosis		*					
Rectal and large intestinal atresia/stenosis		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					
Trisomy 18 (Edwards syndrome)		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
HOWARD	5239			HOWARD	5239		
All Defects		146	278.68	Omphalocele		*	
Anotia/microtia		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		6	11.45
Aortic valve stenosis		*		Pulmonary valve atresia and stenosis		*	
Atrial septal defect		27	51.54	Rectal and large intestinal atresia/stenosis		*	
Atrioventricular septal defect		*		Small intestinal atresia/stenosis		*	
Bladder exstrophy		*		Spina bifida without anencephaly		8	15.27
Choanal atresia		*		Tetralogy of Fallot (TOF)		*	
Cleft lip only (without cleft palate)		*		Transposition of the great arteries		*	
Cleft lip with cleft palate		*		Tricuspid valve atresia and stenosis		*	
Cleft palate only (without cleft lip)		*		Trisomy 21 (Down syndrome)		7	13.36
Cloacal exstrophy		*		Turner syndrome		*	
Clubfoot		*		Ventricular septal defect		28	53.45
Coarctation of aorta		*					
Craniosynostosis		*					
Deletion 22 q11.2		*					
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypospadias		19	36.27				
Limb deficiencies (reduction defects)		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total	Rate	
HUNTINGTON	2194			JACKSON	2820		
All Defects		45	205.1	All Defects	49	173.76	
Atrial septal defect		12	54.69	Anotia/microtia	*		
Cleft lip only (without cleft palate)	*			Atrial septal defect	18	63.83	
Cleft lip with cleft palate	*			Choanal atresia	*		
Cleft palate only (without cleft lip)	*			Cleft lip with cleft palate	*		
Clubfoot	*			Cleft palate only (without cleft lip)	*		
Congenital posterior urethral valves	*			Craniosynostosis	*		
Craniosynostosis	*			Double outlet right ventricle (DORV)	*		
Esophageal atresia/tracheoesophageal fistula	*			Gastroschisis	*		
Fetal alcohol syndrome	*			Holoprosencephaly	*		
Hypoplastic left heart syndrome	*			Hypospadias	5	17.73	
Hypospadias	7		31.91	Limb deficiencies (reduction defects)	*		
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*			Pulmonary valve atresia and stenosis	*		
Renal agenesis/hypoplasia	*			Rectal and large intestinal atresia/stenosis	*		
Small intestinal atresia/stenosis	*			Renal agenesis/hypoplasia	*		
Spina bifida without anencephaly	*			Small intestinal atresia/stenosis	*		
Trisomy 21 (Down syndrome)	*			Total anomalous pulmonary venous connection	*		
Ventricular septal defect	5		22.79	Ventricular septal defect	6	21.28	

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
JASPER	2007			JAY	1502		
All Defects		51	254.11	All Defects		30	199.73
Atrial septal defect		9	44.84	Atrial septal defect		13	86.55
Atrioventricular septal defect		*		Atrioventricular septal defect		*	
Cleft lip with cleft palate		*		Cleft palate only (without cleft lip)		*	
Cleft palate only (without cleft lip)		*		Ebstein's anomaly		*	
Clubfoot		*		Hypospadias		*	
Diaphragmatic hernia		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Gastroschisis		*		Pulmonary valve atresia and stenosis		*	
Holoprosencephaly		*		Rectal and large intestinal atresia/stenosis		*	
Hypospadias		9	44.84	Transposition of the great arteries		*	
Limb deficiencies (reduction defects)		*		Trisomy 21 (Down syndrome)		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Ventricular septal defect		*	
Pulmonary valve atresia and stenosis		*					
Rectal and large intestinal atresia/stenosis		*					
Renal agenesis/hypoplasia		*					
Transposition of the great arteries		*					
Trisomy 21 (Down syndrome)		5	24.91				
Ventricular septal defect		9	44.84				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
JEFFERSON	1893			JENNINGS	1794		
All Defects		35	184.89	All Defects		36	200.67
Atrial septal defect		*		Anophthalmia/microphthalmia		*	
Cleft lip only (without cleft palate)		*		Aortic valve stenosis		*	
Cleft lip with cleft palate		*		Atrial septal defect		7	39.02
Craniosynostosis		*		Atrioventricular septal defect		*	
Encephalocele		*		Cleft lip with cleft palate		*	
Gastroschisis		*		Coarctation of aorta		*	
Hypoplastic left heart syndrome		*		Double outlet right ventricle (DORV)		*	
Hypospadias		9	47.54	Ebstein's anomaly		*	
Limb deficiencies (reduction defects)		*		Esophageal atresia/tracheoesophageal fistula		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Gastroschisis		*	
Pulmonary valve atresia and stenosis		*		Hypospadias		*	
Renal agenesis/hypoplasia		*		Pulmonary valve atresia and stenosis		*	
Trisomy 21 (Down syndrome)		*		Rectal and large intestinal atresia/stenosis		*	
Ventricular septal defect		6	31.7	Renal agenesis/hypoplasia		*	
				Total anomalous pulmonary venous connection		*	
				Transposition of the great arteries		*	
				Trisomy 21 (Down syndrome)		*	
				Ventricular septal defect		6	33.44

Note 1—* indicates < 5 in number occurred.

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County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
JOHNSON	9337			JOHNSON	9337		
All Defects		178	190.64	Limb deficiencies (reduction defects)	*		
Anotia/microtia		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	19		20.35
Aortic valve stenosis		*		Rectal and large intestinal atresia/stenosis	5		5.36
Atrial septal defect		44	47.12	Renal agenesis/hypoplasia	*		
Atrioventricular septal defect		*		Small intestinal atresia/stenosis	*		
Bladder exstrophy		*		Spina bifida without anencephaly	*		
Choanal atresia		*		Tetralogy of Fallot (TOF)	*		
Cleft lip with cleft palate		8	8.57	Transposition of the great arteries	*		
Cleft palate only (without cleft lip)		5	5.36	Trisomy 13 (Patau syndrome)	*		
Clubfoot		*		Trisomy 18 (Edwards syndrome)	*		
Coarctation of aorta		7	7.5	Trisomy 21 (Down syndrome)	9		9.64
Common truncus		*		Ventricular septal defect	26		27.85
Congenital posterior urethral valves		*					
Craniosynostosis		*					
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		5	5.36				
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		11	11.78				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
KNOX	2313			KOSCIUSKO	5239		
All Defects		47	203.2	All Defects		82	156.52
Anotia/microtia		*		Atrial septal defect		20	38.18
Atrial septal defect		13	56.2	Atrioventricular septal defect		*	
Atrioventricular septal defect		*		Cleft lip with cleft palate		*	
Cleft lip with cleft palate		*		Cleft palate only (without cleft lip)		*	
Coarctation of aorta		*		Coarctation of aorta		*	
Craniosynostosis		*		Esophageal atresia/tracheoesophageal fistula		*	
Gastroschisis		*		Fetal alcohol syndrome		*	
Hypospadias		6	25.94	Gastroschisis		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Holoprosencephaly		*	
Pulmonary valve atresia and stenosis		*		Hypoplastic left heart syndrome		*	
Rectal and large intestinal atresia/stenosis		*		Hypospadias		17	32.45
Renal agenesis/hypoplasia		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		5	9.54
Single ventricle		*		Pulmonary valve atresia and stenosis		*	
Spina bifida without anencephaly		*		Rectal and large intestinal atresia/stenosis		*	
Transposition of the great arteries		*		Renal agenesis/hypoplasia		*	
Tricuspid valve atresia and stenosis		*		Tetralogy of Fallot (TOF)		*	
Trisomy 21 (Down syndrome)		*		Transposition of the great arteries		*	
Ventricular septal defect		7	30.26	Trisomy 21 (Down syndrome)		*	
				Ventricular septal defect		16	30.54

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County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
LAGRANGE	3777						
All Defects		33	87.37				
Atrial septal defect		5	13.24				
Coarctation of aorta		*					
Congenital posterior urethral valves		*					
Craniosynostosis		*					
Diaphragmatic hernia		*					
Fetal alcohol syndrome		*					
Hypoplastic left heart syndrome		*					
Hypospadias		8	21.18				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Renal agenesis/hypoplasia		*					
Single ventricle		*					
Transposition of the great arteries		*					
Tricuspid valve atresia and stenosis		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
LAKE	32214			LAKE	32214		
All Defects		533	165.46	Holoprosencephaly		7	2.17
Anencephaly		*		Hypoplastic left heart syndrome		5	1.55
Anophthalmia/microphthalmia		*		Hypospadias		76	23.59
Anotia/microtia		5	1.55	Limb deficiencies (reduction defects)		5	1.55
Aortic valve stenosis		*		Omphalocele		*	
Atrial septal defect		103	31.97	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		35	10.86
Atrioventricular septal defect		12	3.73	Pulmonary valve atresia and stenosis		14	4.35
Biliary atresia		*		Rectal and large intestinal atresia/stenosis		7	2.17
Choanal atresia		*		Renal agenesis/hypoplasia		*	
Cleft lip only (without cleft palate)		12	3.73	Single ventricle		*	
Cleft lip with cleft palate		13	4.04	Small intestinal atresia/stenosis		*	
Cleft palate only (without cleft lip)		11	3.41	Spina bifida without anencephaly		9	2.79
Clubfoot		7	2.17	Tetralogy of Fallot (TOF)		*	
Coarctation of aorta		7	2.17	Transposition of the great arteries		7	2.17
Common truncus		*		Tricuspid valve atresia and stenosis		*	
Congenital cataract		*		Trisomy 13 (Patau syndrome)		*	
Congenital posterior urethral valves		*		Trisomy 18 (Edwards syndrome)		*	
Craniosynostosis		*		Trisomy 21 (Down syndrome)		42	13.04
Deletion 22 q11.2		*		Ventricular septal defect		97	30.11
Diaphragmatic hernia		8	2.48				
Double outlet right ventricle (DORV)		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		9	2.79				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
LA PORTE	6841			LA PORTE	6841		
All Defects		100	146.18	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	6		8.77
Anophthalmia/microphthalmia		*		Pulmonary valve atresia and stenosis	*		
Aortic valve stenosis		*		Rectal and large intestinal atresia/stenosis	*		
Atrial septal defect		18	26.31	Renal agenesis/hypoplasia	*		
Bladder exstrophy		*		Single ventricle	*		
Choanal atresia		*		Spina bifida without anencephaly	*		
Cleft lip with cleft palate		*		Tetralogy of Fallot (TOF)	*		
Cleft palate only (without cleft lip)		*		Transposition of the great arteries	*		
Coarctation of aorta		*		Trisomy 18 (Edwards syndrome)	*		
Congenital posterior urethral valves		*		Trisomy 21 (Down syndrome)	*		
Diaphragmatic hernia		*		Ventricular septal defect	17		24.85
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypospadias		13	19				
Limb deficiencies (reduction defects)		*					

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County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total	Rate	
LAWRENCE	2504						
All Defects		53	211.66				
Aortic valve stenosis		*					
Atrial septal defect		10	39.94				
Cleft palate only (without cleft lip)		*					
Clubfoot		*					
Coarctation of aorta		*					
Craniosynostosis		*					
Deletion 22 q11.2		*					
Double outlet right ventricle (DORV)		*					
Ebstein's anomaly		*					
Holoprosencephaly		*					
Hypospadias		12	47.92				
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		6	23.96				
Pulmonary valve atresia and stenosis		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					
Transposition of the great arteries		*					
Trisomy 18 (Edwards syndrome)		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		6	23.96				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
MADISON	8057			MADISON	8057		
All Defects		150	186.17	Pulmonary valve atresia and stenosis	5		6.21
Atrial septal defect		21	26.06	Rectal and large intestinal atresia/stenosis	*		
Atrioventricular septal defect		*		Renal agenesis/hypoplasia	*		
Cleft lip only (without cleft palate)		6	7.45	Small intestinal atresia/stenosis	*		
Cleft lip with cleft palate		*		Spina bifida without anencephaly	*		
Cleft palate only (without cleft lip)		5	6.21	Tetralogy of Fallot (TOF)	*		
Cloacal exstrophy		*		Total anomalous pulmonary venous connection	*		
Clubfoot		*		Tricuspid valve atresia and stenosis	*		
Coarctation of aorta		*		Trisomy 21 (Down syndrome)	9		11.17
Congenital cataract		*		Ventricular septal defect	21		26.06
Craniosynostosis		*					
Diaphragmatic hernia		*					
Ebstein's anomaly		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		25	31.03				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		12	14.89				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
MARION	75363			MARION	75363		
All Defects		1438	190.81	Encephalocele		*	
Anencephaly		*		Esophageal atresia/tracheoesophageal fistula		20	2.65
Anophthalmia/microphthalmia		6	.8	Fetal alcohol syndrome		19	2.52
Anotia/microtia		6	.8	Gastroschisis		34	4.51
Aortic valve stenosis		13	1.72	Holoprosencephaly		24	3.18
Atrial septal defect		302	40.07	Hypoplastic left heart syndrome		11	1.46
Atrioventricular septal defect		23	3.05	Hypospadias		176	23.35
Biliary atresia		5	.66	Interrupted aortic arch (IAA)		*	
Bladder exstrophy		*		Limb deficiencies (reduction defects)		13	1.72
Choanal atresia		10	1.33	Omphalocele		6	.8
Cleft lip only (without cleft palate)		10	1.33	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		113	14.99
Cleft lip with cleft palate		39	5.17	Pulmonary valve atresia and stenosis		44	5.84
Cleft palate only (without cleft lip)		32	4.25	Rectal and large intestinal atresia/stenosis		21	2.79
Cloacal exstrophy		*		Renal agenesis/hypoplasia		17	2.26
Clubfoot		17	2.26	Single ventricle		*	
Coarctation of aorta		31	4.11	Small intestinal atresia/stenosis		11	1.46
Common truncus		*		Spina bifida without anencephaly		16	2.12
Congenital cataract		5	.66	Tetralogy of Fallot (TOF)		17	2.26
Congenital posterior urethral valves		5	.66	Total anomalous pulmonary venous connection		5	.66
Craniosynostosis		16	2.12				
Deletion 22 q11.2		*					
Diaphragmatic hernia		23	3.05				
Double outlet right ventricle (DORV)		8	1.06				
Ebstein's anomaly		*					

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
MARION	75363			MARSHALL	3094		
Transposition of the great arteries		14	1.86	All Defects		32	103.43
Tricuspid valve atresia and stenosis		5	.66	Atrial septal defect		5	16.16
Trisomy 13 (Patau syndrome)		7	.93	Cleft lip only (without cleft palate)		*	
Trisomy 18 (Edwards syndrome)		11	1.46	Coarctation of aorta		*	
Trisomy 21 (Down syndrome)		71	9.42	Craniosynostosis		*	
Turner syndrome		*		Diaphragmatic hernia		*	
Ventricular septal defect		205	27.2	Ebstein's anomaly		*	
				Esophageal atresia/tracheoesophageal fistula		*	
				Gastroschisis		*	
				Hypospadias		*	
				Omphalocele		*	
				Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
				Pulmonary valve atresia and stenosis		*	
				Rectal and large intestinal atresia/stenosis		*	
				Spina bifida without anencephaly		*	
				Trisomy 21 (Down syndrome)		*	
				Ventricular septal defect		*	

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
MARTIN	647			MIAMI	2008		
All Defects		11	170.02	All Defects		43	214.14
Aortic valve stenosis		*		Atrial septal defect		12	59.76
Cleft lip with cleft palate		*		Cleft palate only (without cleft lip)		*	
Coarctation of aorta		*		Clubfoot		*	
Gastroschisis		*		Coarctation of aorta		*	
Hypospadias		*		Craniosynostosis		*	
Spina bifida without anencephaly		*		Double outlet right ventricle (DORV)		*	
Ventricular septal defect		*		Fetal alcohol syndrome		*	
				Gastroschisis		*	
				Hypoplastic left heart syndrome		*	
				Hypospadias		*	
				Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
				Pulmonary valve atresia and stenosis		*	
				Tetralogy of Fallot (TOF)		*	
				Total anomalous pulmonary venous connection		*	
				Transposition of the great arteries		*	
				Trisomy 21 (Down syndrome)		*	
				Ventricular septal defect		6	29.88

Note 1—* indicates < 5 in number occurred.

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County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
MONROE	6556			MONROE	6556		
All Defects		145	221.17	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Anotia/microtia		*		Pulmonary valve atresia and stenosis		*	
Atrial septal defect		32	48.81	Rectal and large intestinal atresia/stenosis		*	
Atrioventricular septal defect		*		Renal agenesis/hypoplasia		*	
Cleft lip only (without cleft palate)		*		Single ventricle		*	
Cleft lip with cleft palate		*		Small intestinal atresia/stenosis		*	
Cleft palate only (without cleft lip)		8	12.2	Spina bifida without anencephaly		*	
Cloacal exstrophy		*		Tetralogy of Fallot (TOF)		*	
Clubfoot		*		Total anomalous pulmonary venous connection		*	
Coarctation of aorta		6	9.15	Transposition of the great arteries		*	
Congenital posterior urethral valves		*		Trisomy 18 (Edwards syndrome)		*	
Craniosynostosis		*		Trisomy 21 (Down syndrome)	10		15.25
Double outlet right ventricle (DORV)		*		Ventricular septal defect	29		44.23
Ebstein's anomaly		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		12	18.3				

Note 1—* indicates < 5 in number occurred.

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
MONTGOMERY	2371			MONTGOMERY	2371		
All Defects		74	312.1	Small intestinal atresia/stenosis		*	
Anotia/microtia		*		Total anomalous pulmonary venous connection		*	
Aortic valve stenosis		*		Tricuspid valve atresia and stenosis		*	
Atrial septal defect		16	67.48	Turner syndrome		*	
Atrioventricular septal defect		*		Ventricular septal defect	15		63.26
Cleft lip only (without cleft palate)		*					
Cleft lip with cleft palate		*					
Cleft palate only (without cleft lip)		*					
Coarctation of aorta		*					
Double outlet right ventricle (DORV)		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		11	46.39				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Pulmonary valve atresia and stenosis		*					
Renal agenesis/hypoplasia		*					
Single ventricle		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

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County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
MORGAN	4161			MORGAN	4161		
All Defects		88	211.49	Pulmonary valve atresia and stenosis		*	
Aortic valve stenosis		*		Rectal and large intestinal atresia/stenosis		*	
Atrial septal defect		22	52.87	Renal agenesis/hypoplasia		*	
Biliary atresia		*		Small intestinal atresia/stenosis		*	
Bladder exstrophy		*		Spina bifida without anencephaly		*	
Choanal atresia		*		Tetralogy of Fallot (TOF)		*	
Cleft lip only (without cleft palate)		*		Transposition of the great arteries		*	
Cleft lip with cleft palate		*		Tricuspid valve atresia and stenosis		*	
Cleft palate only (without cleft lip)		*		Trisomy 21 (Down syndrome)		*	
Clubfoot		*		Ventricular septal defect	9		21.63
Coarctation of aorta		*					
Craniosynostosis		*					
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypospadias		11	26.44				
Interrupted aortic arch (IAA)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		6	14.42				

Note 1—* indicates < 5 in number occurred.

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Data compiled on 10/21/2014 1:59:45 PM

County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
NEWTON	723						
All Defects		11	152.14				
Atrial septal defect		*					
Biliary atresia		*					
Choanal atresia		*					
Cleft palate only (without cleft lip)		*					
Gastroschisis		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Trisomy 18 (Edwards syndrome)		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total	Rate	
NOBLE	3214			NOBLE	3214		
All Defects		57	177.35	Ventricular septal defect	8	24.89	
Aortic valve stenosis		*					
Atrial septal defect		10	31.11				
Atrioventricular septal defect		*					
Choanal atresia		*					
Cleft lip with cleft palate		*					
Clubfoot		*					
Coarctation of aorta		*					
Craniosynostosis		*					
Ebstein's anomaly		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		5	15.56				
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		7	21.78				
Pulmonary valve atresia and stenosis		*					
Renal agenesis/hypoplasia		*					
Trisomy 18 (Edwards syndrome)		*					
Trisomy 21 (Down syndrome)		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
ORANGE	1180			ORANGE	1180		
All Defects		34	288.14	Trisomy 21 (Down syndrome)		*	
Atrial septal defect		6	50.85	Ventricular septal defect		6	50.85
Choanal atresia		*		OWEN	1217		
Cleft lip only (without cleft palate)		*		All Defects		40	328.68
Cleft lip with cleft palate		*		Anotia/microtia		*	
Cleft palate only (without cleft lip)		*		Atrial septal defect		8	65.74
Cloacal exstrophy		*		Choanal atresia		*	
Clubfoot		*		Cleft lip only (without cleft palate)		*	
Coarctation of aorta		*		Cleft lip with cleft palate		*	
Deletion 22 q11.2		*		Cleft palate only (without cleft lip)		*	
Diaphragmatic hernia		*		Clubfoot		*	
Double outlet right ventricle (DORV)		*		Coarctation of aorta		*	
Esophageal atresia/tracheoesophageal fistula		*		Craniosynostosis		*	
Hypospadias		*		Diaphragmatic hernia		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Hypospadias		6	49.3
Pulmonary valve atresia and stenosis		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Rectal and large intestinal atresia/stenosis		*		Rectal and large intestinal atresia/stenosis		*	
Small intestinal atresia/stenosis		*		Spina bifida without anencephaly		5	41.08
Tetralogy of Fallot (TOF)		*		Transposition of the great arteries		*	
				Trisomy 21 (Down syndrome)		*	
				Ventricular septal defect		*	

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Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

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County	Live Births			County	Live Births		
Defect	Total	Rate		Defect	Total	Rate	
PARKE	957			PERRY	1086		
All Defects	19	198.54		All Defects	13	119.71	
Atrial septal defect	5	52.25		Atrioventricular septal defect	*		
Atrioventricular septal defect	*			Choanal atresia	*		
Esophageal atresia/tracheoesophageal fistula	*			Coarctation of aorta	*		
Hypospadias	*			Craniosynostosis	*		
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*			Holoprosencephaly	*		
Pulmonary valve atresia and stenosis	*			Hypospadias	*		
Small intestinal atresia/stenosis	*			Rectal and large intestinal atresia/stenosis	*		
Tetralogy of Fallot (TOF)	*			Trisomy 18 (Edwards syndrome)	*		
Ventricular septal defect	*			Trisomy 21 (Down syndrome)	*		
				Ventricular septal defect	*		
				PIKE	736		
				All Defects	10	135.87	
				Atrial septal defect	*		
				Atrioventricular septal defect	*		
				Double outlet right ventricle (DORV)	*		
				Esophageal atresia/tracheoesophageal fistula	*		
				Gastroschisis	*		
				Hypospadias	*		
				Limb deficiencies (reduction defects)	*		
				Ventricular septal defect	*		

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
PORTER	8854			PORTER	8854		
All Defects		129	145.7	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		8	9.04
Anophthalmia/microphthalmia		*		Pulmonary valve atresia and stenosis		*	
Aortic valve stenosis		*		Renal agenesis/hypoplasia		*	
Atrial septal defect		22	24.85	Small intestinal atresia/stenosis		*	
Atrioventricular septal defect		*		Spina bifida without anencephaly		*	
Biliary atresia		*		Tetralogy of Fallot (TOF)		*	
Cleft lip only (without cleft palate)		*		Total anomalous pulmonary venous connection		*	
Cleft lip with cleft palate		*		Transposition of the great arteries		*	
Cleft palate only (without cleft lip)		*		Trisomy 18 (Edwards syndrome)		*	
Cloacal exstrophy		*		Trisomy 21 (Down syndrome)		13	14.68
Clubfoot		*		Ventricular septal defect		18	20.33
Coarctation of aorta		*					
Congenital cataract		*					
Diaphragmatic hernia		*					
Encephalocele		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		14	15.81				
Limb deficiencies (reduction defects)		10	11.29				
Omphalocele		*					

Note 1—* indicates < 5 in number occurred.

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
POSEY	1372			PUTNAM	1917		
All Defects		16	116.62	All Defects		50	260.82
Atrial septal defect		*		Anotia/microtia		*	
Cleft lip with cleft palate		*		Atrial septal defect		11	57.38
Cleft palate only (without cleft lip)		*		Biliary atresia		*	
Coarctation of aorta		*		Cleft palate only (without cleft lip)		*	
Ebstein's anomaly		*		Clubfoot		*	
Hypospadias		*		Craniosynostosis		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Double outlet right ventricle (DORV)		*	
Renal agenesis/hypoplasia		*		Esophageal atresia/tracheoesophageal fistula		*	
Tetralogy of Fallot (TOF)		*		Gastroschisis		*	
Ventricular septal defect		*		Holoprosencephaly		*	
				Hypospadias		*	
PULASKI	756			Limb deficiencies (reduction defects)		5	26.08
All Defects		11	145.5	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		6	31.3
Aortic valve stenosis		*		Renal agenesis/hypoplasia		*	
Atrial septal defect		*		Small intestinal atresia/stenosis		*	
Cleft palate only (without cleft lip)		*		Spina bifida without anencephaly		*	
Hypospadias		*		Tetralogy of Fallot (TOF)		*	
Rectal and large intestinal atresia/stenosis		*		Trisomy 21 (Down syndrome)		*	
Ventricular septal defect		*		Ventricular septal defect		8	41.73

Note 1—* indicates < 5 in number occurred.

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County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
RANDOLPH	1527			RANDOLPH	1527		
All Defects		59	386.38	Pulmonary valve atresia and stenosis		*	
Anophthalmia/microphthalmia		*		Rectal and large intestinal atresia/stenosis		*	
Aortic valve stenosis		*		Renal agenesis/hypoplasia		*	
Atrial septal defect		12	78.59	Small intestinal atresia/stenosis		*	
Atrioventricular septal defect		*		Tetralogy of Fallot (TOF)		*	
Choanal atresia		*		Transposition of the great arteries		*	
Cleft lip only (without cleft palate)		*		Trisomy 21 (Down syndrome)		*	
Cleft lip with cleft palate		*		Ventricular septal defect	7		45.84
Cleft palate only (without cleft lip)		*					
Cloacal exstrophy		*		RIPLEY	1675		
Clubfoot		*		All Defects		9	53.73
Coarctation of aorta		*		Cleft lip only (without cleft palate)		*	
Craniosynostosis		*		Cleft palate only (without cleft lip)		*	
Deletion 22 q11.2		*		Gastroschisis		*	
Diaphragmatic hernia		*		Hypospadias		*	
Esophageal atresia/tracheoesophageal fistula		*		Pulmonary valve atresia and stenosis		*	
Gastroschisis		*		Renal agenesis/hypoplasia		*	
Holoprosencephaly		*		Spina bifida without anencephaly		*	
Hypospadias		7	45.84	Trisomy 21 (Down syndrome)		*	
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		5	32.74				

Note 1—* indicates < 5 in number occurred.

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Data compiled on 10/21/2014 1:59:45 PM

County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
RUSH	933						
All Defects		16	171.49				
Atrial septal defect		*					
Atrioventricular septal defect		*					
Cleft palate only (without cleft lip)		*					
Craniosynostosis		*					
Holoprosencephaly		*					
Hypospadias		*					
Renal agenesis/hypoplasia		*					
Small intestinal atresia/stenosis		*					
Trisomy 21 (Down syndrome)		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
ST. JOSEPH	18123			ST. JOSEPH	18123		
All Defects		210	115.87	Hypospadias		20	11.04
Anotia/microtia		*		Limb deficiencies (reduction defects)		*	
Aortic valve stenosis		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		19	10.48
Atrial septal defect		26	14.35	Pulmonary valve atresia and stenosis		7	3.86
Atrioventricular septal defect		*		Rectal and large intestinal atresia/stenosis		5	2.76
Biliary atresia		*		Renal agenesis/hypoplasia		9	4.97
Choanal atresia		*		Small intestinal atresia/stenosis		5	2.76
Cleft lip only (without cleft palate)		5	2.76	Spina bifida without anencephaly		7	3.86
Cleft lip with cleft palate		*		Tetralogy of Fallot (TOF)		*	
Cleft palate only (without cleft lip)		7	3.86	Total anomalous pulmonary venous connection		*	
Clubfoot		*		Transposition of the great arteries		*	
Coarctation of aorta		*		Tricuspid valve atresia and stenosis		*	
Common truncus		*		Trisomy 18 (Edwards syndrome)		*	
Congenital cataract		*		Trisomy 21 (Down syndrome)		12	6.62
Congenital posterior urethral valves		*		Ventricular septal defect		25	13.79
Craniosynostosis		*					
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		11	6.07				
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					

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Data compiled on 10/21/2014 1:59:45 PM

County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
SCOTT	1536						
All Defects		5	32.55				
Atrial septal defect		*					
Pulmonary valve atresia and stenosis		*					
Ventricular septal defect		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
SHELBY	2694			SHELBY	2694		
All Defects		65	241.28	Rectal and large intestinal atresia/stenosis	*		
Anophthalmia/microphthalmia		*		Renal agenesis/hypoplasia	*		
Anotia/microtia		*		Small intestinal atresia/stenosis	*		
Aortic valve stenosis		*		Spina bifida without anencephaly	*		
Atrial septal defect		11	40.83	Trisomy 18 (Edwards syndrome)	*		
Cleft lip only (without cleft palate)		*		Trisomy 21 (Down syndrome)	*		
Cleft palate only (without cleft lip)		*		Ventricular septal defect	9	33.41	
Clubfoot		*					
Coarctation of aorta		*					
Diaphragmatic hernia		*					
Ebstein's anomaly		*					
Encephalocele		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		6	22.27				
Limb deficiencies (reduction defects)		*					
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Pulmonary valve atresia and stenosis		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
SPENCER	1181			STARKE	1434		
All Defects		20	169.35	All Defects		15	104.6
Anotia/microtia		*		Atrial septal defect		*	
Atrial septal defect		*		Cleft palate only (without cleft lip)		*	
Atrioventricular septal defect		*		Craniosynostosis		*	
Craniosynostosis		*		Encephalocele		*	
Diaphragmatic hernia		*		Fetal alcohol syndrome		*	
Encephalocele		*		Hypoplastic left heart syndrome		*	
Hypospadias		5	42.34	Hypospadias		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Trisomy 18 (Edwards syndrome)		*	
Pulmonary valve atresia and stenosis		*		Turner syndrome		*	
Rectal and large intestinal atresia/stenosis		*		Ventricular septal defect		*	
Renal agenesis/hypoplasia		*					
Single ventricle		*					
Tricuspid valve atresia and stenosis		*					
Trisomy 21 (Down syndrome)		*					

Note 1—* indicates < 5 in number occurred.

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect	Total	Rate		Defect	Total	Rate	
STEUBEN	1849			SULLIVAN	1135		
All Defects	34	183.88		All Defects	18	158.59	
Anotia/microtia	*			Atrial septal defect	*		
Atrial septal defect	6	32.45		Cleft lip only (without cleft palate)	*		
Cleft lip only (without cleft palate)	*			Hypoplastic left heart syndrome	*		
Craniosynostosis	*			Hypospadias	*		
Diaphragmatic hernia	*			Limb deficiencies (reduction defects)	*		
Fetal alcohol syndrome	*			Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*		
Gastroschisis	*			Pulmonary valve atresia and stenosis	*		
Hypospadias	8	43.27		Rectal and large intestinal atresia/stenosis	*		
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	8	43.27		Spina bifida without anencephaly	*		
Trisomy 21 (Down syndrome)	*			Tetralogy of Fallot (TOF)	*		
Ventricular septal defect	*			Trisomy 21 (Down syndrome)	*		
				Ventricular septal defect	*		
				SWITZERLAND	634		
				All Defects	*		
				Hypospadias	*		
				Trisomy 21 (Down syndrome)	*		
				Ventricular septal defect	*		

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
TIPPECANOE	11179			TIPPECANOE	11179		
All Defects		301	269.25	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	11		9.84
Anotia/microtia		*		Pulmonary valve atresia and stenosis	8		7.16
Aortic valve stenosis		*		Rectal and large intestinal atresia/stenosis	8		7.16
Atrial septal defect		68	60.83	Renal agenesis/hypoplasia	*		
Atrioventricular septal defect		7	6.26	Single ventricle	*		
Biliary atresia		*		Small intestinal atresia/stenosis	*		
Choanal atresia		*		Spina bifida without anencephaly	*		
Cleft lip only (without cleft palate)		*		Total anomalous pulmonary venous connection	*		
Cleft lip with cleft palate		6	5.37	Transposition of the great arteries	*		
Cleft palate only (without cleft lip)		9	8.05	Trisomy 21 (Down syndrome)	13		11.63
Clubfoot		7	6.26	Ventricular septal defect	71		63.51
Coarctation of aorta		5	4.47				
Congenital cataract		5	4.47				
Craniosynostosis		*					
Double outlet right ventricle (DORV)		*					
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		7	6.26				
Holoprosencephaly		*					
Hypospadias		29	25.94				
Interrupted aortic arch (IAA)		*					
Limb deficiencies (reduction defects)		*					

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Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
TIPTON	775						
All Defects		26	335.48				
Anotia/microtia		*					
Aortic valve stenosis		*					
Atrial septal defect		*					
Choanal atresia		*					
Cleft lip only (without cleft palate)		*					
Coarctation of aorta		*					
Congenital cataract		*					
Gastroschisis		*					
Hypospadias		7	90.32				
Limb deficiencies (reduction defects)		*					
Spina bifida without anencephaly		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		5	64.52				

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect	Total		Rate
VANDERBURGH	11701			VANDERBURGH	11701		
All Defects		173	147.85	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	14		11.96
Atrial septal defect		23	19.66	Pulmonary valve atresia and stenosis	10		8.55
Atrioventricular septal defect		*		Rectal and large intestinal atresia/stenosis	*		
Biliary atresia		*		Renal agenesis/hypoplasia	6		5.13
Cleft lip with cleft palate		*		Single ventricle	*		
Cleft palate only (without cleft lip)		*		Spina bifida without anencephaly	*		
Clubfoot		5	4.27	Tetralogy of Fallot (TOF)	7		5.98
Coarctation of aorta		*		Total anomalous pulmonary venous connection	*		
Common truncus		*		Transposition of the great arteries	*		
Deletion 22 q11.2		*		Tricuspid valve atresia and stenosis	*		
Diaphragmatic hernia		*		Trisomy 18 (Edwards syndrome)	*		
Double outlet right ventricle (DORV)		6	5.13	Trisomy 21 (Down syndrome)	*		
Encephalocele		*		Ventricular septal defect	31		26.49
Esophageal atresia/tracheoesophageal fistula		*					
Fetal alcohol syndrome		*					
Gastroschisis		*					
Holoprosencephaly		*					
Hypoplastic left heart syndrome		*					
Hypospadias		17	14.53				
Interrupted aortic arch (IAA)		*					
Limb deficiencies (reduction defects)		5	4.27				

Note 1---* indicates < 5 in number occurred.

Note 2---Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect	Total	Rate	Defect	Total	Rate		
VERMILLION	839						
All Defects	20	238.38					
Atrial septal defect	7	83.43					
Cleft lip only (without cleft palate)	*						
Cleft lip with cleft palate	*						
Cleft palate only (without cleft lip)	*						
Clubfoot	*						
Gastroschisis	*						
Hypospadias	*						
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	*						
Pulmonary valve atresia and stenosis	*						
Tetralogy of Fallot (TOF)	*						

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
VIGO	6553			VIGO	6553		
All Defects		182	277.74	Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		30	45.78
Aortic valve stenosis		*		Pulmonary valve atresia and stenosis		7	10.68
Atrial septal defect		30	45.78	Rectal and large intestinal atresia/stenosis		5	7.63
Atrioventricular septal defect		*		Renal agenesis/hypoplasia		*	
Cleft lip only (without cleft palate)		*		Single ventricle		*	
Cleft lip with cleft palate		6	9.16	Small intestinal atresia/stenosis		*	
Cleft palate only (without cleft lip)		*		Spina bifida without anencephaly		*	
Cloacal exstrophy		*		Tetralogy of Fallot (TOF)		*	
Clubfoot		*		Transposition of the great arteries		*	
Coarctation of aorta		*		Trisomy 21 (Down syndrome)		6	9.16
Congenital cataract		*		Ventricular septal defect		31	47.31
Diaphragmatic hernia		*					
Double outlet right ventricle (DORV)		*					
Ebstein's anomaly		*					
Esophageal atresia/tracheoesophageal fistula		*					
Gastroschisis		*					
Holoprosencephaly		5	7.63				
Hypoplastic left heart syndrome		*					
Hypospadias		12	18.31				
Limb deficiencies (reduction defects)		11	16.79				

Note 1—* indicates < 5 in number occurred.

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect		Total	Rate	Defect		Total	Rate
WABASH	1827			WARREN	450		
All Defects		28	153.26	All Defects		8	177.78
Atrial septal defect		6	32.84	Atrial septal defect		*	
Clubfoot		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Diaphragmatic hernia		*		Renal agenesis/hypoplasia		*	
Esophageal atresia/tracheoesophageal fistula		*		Spina bifida without anencephaly		*	
Fetal alcohol syndrome		*		Ventricular septal defect		*	
Hypospadias		5	27.37				
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		5	27.37				
Pulmonary valve atresia and stenosis		*					
Spina bifida without anencephaly		*					
Tetralogy of Fallot (TOF)		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		*					

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
WARRICK	3399			WASHINGTON	1562		
All Defects		56	164.75	All Defects		19	121.64
Anophthalmia/microphthalmia		*		Atrial septal defect		*	
Atrial septal defect		8	23.54	Cleft lip only (without cleft palate)		*	
Cleft lip only (without cleft palate)		*		Cleft palate only (without cleft lip)		*	
Cleft lip with cleft palate		*		Hypospadias		*	
Cleft palate only (without cleft lip)		*		Limb deficiencies (reduction defects)		*	
Clubfoot		*		Ventricular septal defect		8	51.22
Coarctation of aorta		*					
Diaphragmatic hernia		*					
Encephalocele		*					
Gastroschisis		*					
Hypospadias		13	38.25				
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*					
Pulmonary valve atresia and stenosis		*					
Renal agenesis/hypoplasia		*					
Spina bifida without anencephaly		*					
Transposition of the great arteries		*					
Trisomy 18 (Edwards syndrome)		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		11	32.36				

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Data compiled on 10/21/2014 1:59:45 PM

County	Live Births			County	Live Births		
Defect	Total	Rate		Defect	Total	Rate	
WAYNE	4168			WAYNE	4168		
All Defects	69	165.55		Renal agenesis/hypoplasia	*		
Anotia/microtia	*			Tetralogy of Fallot (TOF)	*		
Atrial septal defect	14	33.59		Transposition of the great arteries	*		
Cleft lip only (without cleft palate)	*			Trisomy 18 (Edwards syndrome)	*		
Cleft lip with cleft palate	*			Trisomy 21 (Down syndrome)	5	12	
Cleft palate only (without cleft lip)	*			Ventricular septal defect	10	23.99	
Clubfoot	*						
Coarctation of aorta	*						
Craniosynostosis	*						
Double outlet right ventricle (DORV)	*						
Esophageal atresia/tracheoesophageal fistula	*						
Gastroschisis	*						
Holoprosencephaly	*						
Hypoplastic left heart syndrome	*						
Hypospadias	6	14.4					
Interrupted aortic arch (IAA)	*						
Limb deficiencies (reduction defects)	*						
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified	9	21.59					
Pulmonary valve atresia and stenosis	*						

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County	Live Births	Total	Rate	County	Live Births	Total	Rate
Defect				Defect			
WELLS	1686			WHITE	1542		
All Defects		34	201.66	All Defects		32	207.52
Atrial septal defect		7	41.52	Atrial septal defect		5	32.43
Atrioventricular septal defect		*		Atrioventricular septal defect		*	
Cleft palate only (without cleft lip)		*		Cleft palate only (without cleft lip)		*	
Clubfoot		*		Coarctation of aorta		*	
Coarctation of aorta		*		Gastroschisis		*	
Double outlet right ventricle (DORV)		*		Hypospadias		*	
Esophageal atresia/tracheoesophageal fistula		*		Limb deficiencies (reduction defects)		*	
Holoprosencephaly		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Hypospadias		*		Pulmonary valve atresia and stenosis		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		5	29.66	Tetralogy of Fallot (TOF)		*	
Pulmonary valve atresia and stenosis		*		Trisomy 21 (Down syndrome)		*	
Rectal and large intestinal atresia/stenosis		*		Ventricular septal defect		8	51.88
Transposition of the great arteries		*					
Trisomy 21 (Down syndrome)		*					
Ventricular septal defect		7	41.52				

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Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

Data compiled on 10/21/2014 1:59:45 PM

County Defect	Live Births	Total	Rate	County Defect	Live Births	Total	Rate
WHITLEY	2032			UNKNOWN	884		
All Defects		25	123.03	All Defects		26	294.12
Atrial septal defect		8	39.37	Anencephaly		*	
Clubfoot		*		Atrial septal defect		*	
Deletion 22 q11.2		*		Atrioventricular septal defect		*	
Fetal alcohol syndrome		*		Cleft palate only (without cleft lip)		*	
Gastroschisis		*		Fetal alcohol syndrome		9	101.81
Hypospadias		*		Hypospadias		*	
Limb deficiencies (reduction defects)		*		Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*	
Pervasive developmental disorders, including autism, childhood disintegrative disorder, Asperger's syndrome, Rett syndrome, & pervasive developmental disorders not otherwise specified		*		Pulmonary valve atresia and stenosis		*	
Pulmonary valve atresia and stenosis		*		Rectal and large intestinal atresia/stenosis		*	
Tetralogy of Fallot (TOF)		*		Trisomy 21 (Down syndrome)		*	
Trisomy 21 (Down syndrome)		*		Ventricular septal defect		*	

Note 1—* indicates < 5 in number occurred.

Note 2—Rates based on fewer than 20 cases are unstable and are not comparable.

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Table 9: 2007-2011 Homebirths to Indiana Women

Birth Year	Total Births	Deaths in First Year of Life	Births with at Least One Reportable Condition
2007	1141	7	36
2008	1195	9	43
2009	1098	7	42
2010	1343	7	61
2011	1376	13	50