

**Obstetrical Care in Iowa: A Report on Health Care Access
To The Iowa State Legislature – Year 2015**

Introduction

This report has been prepared annually in response to a 1997 mandate which amended Iowa Code 135.11, Section 16 (2015 Iowa Code), to require:

16. Consult with the office of statewide clinical education programs at the university of Iowa college of medicine and annually submit a report to the general assembly by January 15 verifying the number of physicians in active practice in Iowa by county who are engaged in providing obstetrical care. To the extent data are readily available, the report shall include information concerning the number of deliveries per year by specialty and county, the age of physicians performing deliveries, and the number of current year graduates of the university of Iowa college of medicine and the Des Moines university — osteopathic medical center entering into residency programs in obstetrics, gynecology, and family practice. The report may include additional data relating to access to obstetrical services that may be available.

2015 Report to the 2016 Legislature

The Bureau of Family Health (BFH), Iowa Department of Public Health, respectfully submits this report in response to the legislative mandate. The data summarized in this report provides an overview of the obstetric workforce in Iowa for the calendar years 2010 through 2014.

Revisions Reflected in Current Report:

In past reports, workforce information was based on all licensed physicians and advanced nurse practitioners in the state. Using this previous method, it is likely that the number and percent of providers delivering babies were overstated. In addition, the previous method did not distinguish physicians by their specialties.

To remedy these limitations, the current analysis used birth certificate data to generate the number and percent of licensed providers actually performing deliveries in our state. Birth certificate data were then linked to data from the Iowa Health Professions Tracking Center (IHPTC) to obtain demographic and physician specialty information.

Definitions:

The categories of providers who perform deliveries and who are included in this report are defined as follows:

- An obstetrician/gynecologist physician has either an M.D. or D.O. degree and has completed a 4 year obstetrics/gynecology residency. This specialty is devoted to medical and surgical care to women and has particular expertise in pregnancy, childbirth, and disorders of the reproductive system.
- A family medicine physician has either an M.D. or D.O. degree and has completed a 3 year family medicine residency. This specialty is devoted to comprehensive care for people of all ages. Often family medicine physicians do not perform surgical deliveries (cesarean sections.)
- An ARNP/CNM (Advanced Registered Nurse Practitioner/Certified Nurse Midwife) is defined as a registered nurse who has completed a midwifery education program and has passed a national certification examination. CNMs tend to care for low-risk pregnant women. Most have a physician as back up if complications arise. CNMs may perform low forceps deliveries and vacuum extractions.

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- A resident is a physician (one who holds the degree of M.D. or D.O.) who practices medicine usually in a hospital or clinic under the direct or indirect supervision of an attending physician. Successful completion of a residency program is a requirement to obtaining an unrestricted license to practice medicine in many jurisdictions.

National Data

- According to Rayburn¹ and colleagues (2012), based on 2010 data there were 5.4 obstetricians /gynecologists per 10,000 women of reproductive age (WRA) in the United States.
- Based on the Rayburn report, Iowa was tied for 46th of 50 states, with 4.2 obstetricians /gynecologists per 10,000 WRA.
 - Rayburn and colleagues may have overestimated the rate of obstetricians/gynecologists per WRA because Rayburn used the total number of the American Congress of Obstetricians and Gynecologists (ACOG) members as a proxy for delivering physicians. In fact, not all obstetricians/gynecologists are members of ACOG, and not all ACOG members actively deliver babies.

2014 Iowa Population and Provider Information

Following are select population estimates for the state of Iowa, calendar year 2014:

- Estimated total Iowa population: 3,107,126 (*US Census Bureau*)
- Women of Reproductive Age (WRA), 15-44: 585,645 (*US Census Bureau*)
- Based on Iowa birth certificate data – the number of physicians that delivered an infant in 2014 per 10,000 WRA were: 11.3: 10,000
 - The total number of delivering physicians includes obstetricians, family medicine physicians, general surgeons, and emergency room physicians.
 - There are no national data to compare total number of delivering physicians by state.
- Based on Iowa birth certificate data – the number of obstetricians/gynecologists that delivered an infant in 2014 per 10,000 WRA were: 3.7 : 10,000
 - Iowa's rate cannot be compared to that of the Rayburn report because Iowa's rate was calculated based on the number of obstetricians/gynecologists who actually delivered an infant vs. ACOG membership.
- We identified 797 unique providers who delivered at least one infant during calendar year 2014.
 - Of these, 221 were obstetricians/gynecologists
 - 337 were family medicine physicians
 - 106 were other types of physicians²
 - 133 were nurse midwives
- Greatest number of deliveries by a single physician: 374
- Average number of deliveries per physician: 187

¹ Rayburn WF, Klagholz JC, Murray-Krezan C, Dowell LE, & Strunk AL. (2012) Distribution of American Congress of Obstetricians and Gynecologists Fellows and Junior Fellows in Practice in the United States. *Obstetrics and Gynecology*; 119 (5) 1017-1022.

² Includes internal medicine, pediatricians, general surgeons, and unspecified other physicians – excludes resident physicians.

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Table 1: Iowa Physician Demographic Information³, 2014

<i>Provider Type</i>	<i>Provider Count</i>	<i>Avg. Age, Delivering Males</i>	<i>Avg. Age Delivering Females</i>	<i>% Delivery Providers, Male</i>	<i>% Delivery Providers, Female</i>
<i>Obstetricians & Gynecologists</i>	221	52.0	43.5	46.4%	53.6%
<i>Family Medicine</i>	337	47.5	45.2	50.9%	49.1%
<i>Other Physicians⁴</i>	106	39.3	35.3	73.2%	26.8%

Table 2: University of Iowa, Carver College of Medicine, Obstetrics & Gynecology and Family Medicine Residency Programs⁵

<i>Specialty</i>	<i>2015 Residents (Res. Year)</i>	<i>2014 Alumni</i>	<i>2014 Iowa residency graduates staying in Iowa to practice</i>
<i>Obstetricians & Gynecologists</i>	20 (2015-19)	5	2
<i>Family Medicine</i>	18 (2015-18)	6	4

Table 3: Iowa medical school 2015 graduates obtaining a residency position in obstetrics & gynecology or family medicine through the National Resident Matching Program⁶

<i>University</i>	<i>OBGYN Residency Positions</i>	<i>OB Iowa Residency Positions</i>	<i>FM Residency Positions</i>	<i>FM Iowa Residency Positions</i>
<i>U of I Carver College of Medicine</i>	9	1/9 (11%)	20	7/20 (35%)
<i>Des Moines University of Osteopathic Medicine</i>	8	0/8 (0%)	84	23/84 (27%)

³ Data source: Office of Statewide Clinical Education Programs, University of Iowa Carver College of Medicine

⁴ Includes internal medicine, pediatricians, general surgeons, and unspecified other physicians – excludes resident physicians.

⁵ University of Iowa Graduate Medical Education Program

⁶ Data sources - [University of Iowa 2015 Match Results](#) and [Des Moines University 2015 Match Results](#)

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Table 4: Family Medicine Residents by Location and Year, 2015⁷

<i>Residency Location</i>	<i>1st Year</i>	<i>2nd Year</i>	<i>3rd year</i>	<i>Total</i>
<i>Cedar Rapids Medical Education</i>	7	7	8	22
<i>Genesis Health System</i>	6	6	7	19
<i>Broadlawns Medical Center</i>	8	8	8	24
<i>Iowa Medical Education Collab.</i>	8	8	8	24
<i>Central Iowa Health System</i>	6	6	6	18
<i>U of I Hospitals and Clinics</i>	6	9	3	18
<i>Mercy Medical Center (Mason)</i>	6	6	6	18
<i>Siouxland Med. Education Fnd.</i>	6	6	7	19
<i>Northeast Iowa Med. Ed. Fnd.</i>	6	6	6	18
Total	59	62	86	180

Table 5: Number of Obstetrics & Gynecology Residents by Location & Year, 2015⁸

<i>Residency Location</i>	<i>1st Year</i>	<i>2nd Year</i>	<i>3rd Year</i>	<i>4th Year</i>	<i>Total</i>
<i>U of I Hospitals and Clinics</i>	5	5	5	5	20

Table 6: Number and percent of deliveries by provider type, Iowa, 2010 -2014⁹

<i>Year</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
Provider Type	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
<i>Obstetricians & Gynecologists</i>	20,916 (56.7)	20,805 (57.3)	21,632 (58.9)	22,377 (60.4)	22,784 (60.4)
<i>Family Medicine</i>	3,508 (9.6)	3,525 (9.7)	3,601 (9.8)	3,847 (10.4)	7,932 (21.0)
<i>Other Physician¹⁰</i>	7,803 (21.3)	7,799 (21.5)	8,196 (22.3)	8,169 (22.0)	1,389 (3.7)
<i>Residents</i>	Not reported				744 (2.0)
<i>CNM/ARNP</i>	1,852 (5.0)	2,128 (5.9)	2,322 (6.3)	2,516 (6.7)	3,217 (8.5)
<i>Unlicensed other¹¹</i>	206 (0.6)	193 (0.5)	163 (0.4)	156 (0.4)	361 (1.0)
<i>Unspecified MD/DO</i>	2,636 (7.2)	2,025 (5.6)	945 (2.6)	0	1,277 (3.4)
Total	36,715	36,282	36,696	37,065	37,703¹²

The increase in the number of family medicine physicians and a decrease in the number of other physicians may be reflective of previous provider specialty misclassification. IDPH will continue to monitor this trend.

⁷ Data obtained from publicly available organization specific websites.

⁸ Data source: University of Iowa Graduate Medical Education Program

⁹ Data sources: Office of Statewide Clinical Education Programs, University of Iowa Carver College of Medicine and IDPH - BHS

¹⁰ Other physicians include maternal/fetal medicine specialists, emergency room physicians and general surgeons (who perform cesarean sections for family medicine patients)

¹¹ Providers without recorded license information such as lay midwives, ambulance drivers and family members

¹² Resident births that occurred out of state were excluded from this report. .

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Figure 1. Percent of deliveries by provider type, Iowa 2014

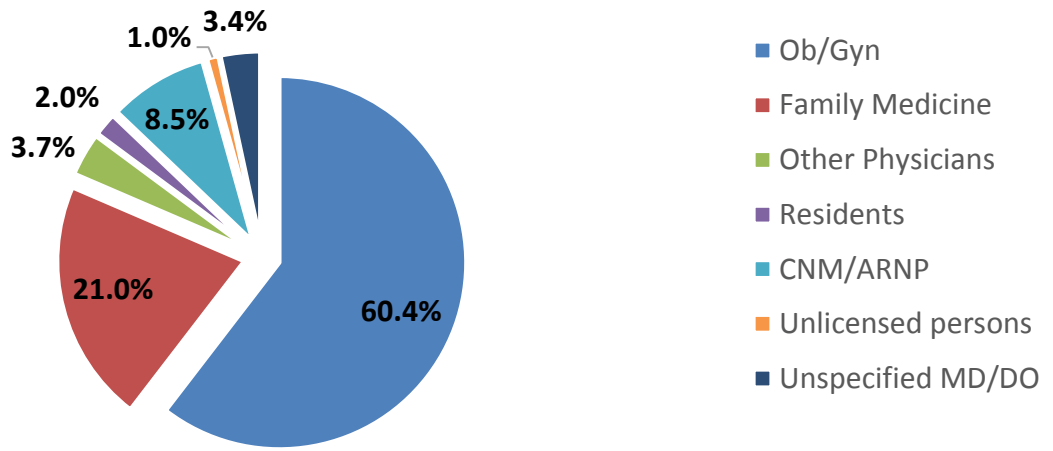


Table 7: Number and percent of births by maternal county of residence, urban or rural, Iowa 2010-2014

	2010	2011	2012	2013	2014
<i>County Status</i> ¹³	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
<i>Urban</i>	22,378 (69.9)	22,104 (60.9)	22,483 (61.3)	22,747 (61.4)	23,218 (61.6)
<i>Rural</i>	14,337 (30.1)	14,178 (39.1)	14,213 (38.7)	14,318 (38.6)	14,485 (38.4)
<i>Total</i>	36,715	36,282	36,696	37,065	37,703

Table 8: Number and percent of deliveries by selected licensed providers and maternal county of residence, urban or rural, Iowa 2014

<i>Status</i>	<i>Obstetrics & Gynecology</i>	<i>Family Medicine</i>	<i>CNM (%)</i>
	Number (%)	Number (%)	Number (%)
<i>Urban</i>	127 (57.5%)	115 (34.1%)	84 (63.1)
<i>Rural</i>	94 (42.5)	222 (65.9%)	49 (36.8)
<i>Totals</i>	221	337	133

¹³ Urban/Rural designation is based on the US Office of Management and Budget categories.

Table 9: Number and percent of unique licensed providers who delivered at least one infant, Iowa 2010-2014

	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
<i>Provider Type</i>	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
<i>Obstetricians & Gynecologists</i>	171 (30.1)	176 (31.4)	189 (33.2)	195 (35.0)	221 (27.8)
<i>Family Medicine</i>	205 (35.9)	209 (37.3)	235 (41.2)	262 (47.0)	337 (42.3)
<i>Other Physicians¹⁴</i>	23 (4.0)	27 (4.8)	31 (5.4)	41 (7.4)	56 (7.0)
<i>CNM/ARNP</i>	53 (9.3)	53 (9.6)	56 (9.8)	59 (10.6)	133 (16.7)
<i>Unspecified MD/DO</i>	118 (20.7)	95 (16.9)	59 (10.4)	0 (0.0)	50 (6.3)
<i>Total</i>	570	560	570	557	797

The increase in the number of unique licensed providers from 2013 to 2014 may not be reflective of a true increase. Rather it may be reflective of the department's improving strategy to detect unique providers then match unique providers to a specialty.

The Iowa Regionalized Perinatal Care system includes criteria that stratify maternal and neonatal care into levels of complexity and recommends referral of high risk patients to higher-level centers with the appropriate resources and personnel to address the required increased complexity of care. This regionalized system of care helps ensure the quality of perinatal care in our rural state.

The current system has three distinct levels, with subdivisions in Level 2 centers. Level 1 centers provide basic care; Level 2 centers provide specialty care, with further subdivisions within this level; Level 3 centers provide subspecialty care for critically ill newborns and high risk pregnant women.

For specific information about Iowa's Regionalized System of Care, refer to the [Guidelines for Perinatal Services, 8th Edition](#).

¹⁴ Other physicians include maternal/fetal medicine specialists, emergency room physicians and general surgeons (who perform cesarean sections for family medicine patients)

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Table 10: Births by Hospital Level of Care, 2010-2014 (Data source – IDPH – BHS)

	2010	2011	2012	2013	2014
<i>OB Level (# hospitals per level¹⁵)</i>	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
<i>Non-hospital births¹⁶</i>	442 (1.2)	450 (1.2)	459 (1.3)	467 (1.3)	532 (1.4)
<i>Level 1 (52)</i>	8,759 (23.9)	8,832 (24.4)	8,932 (24.2)	9,342 (25.2)	9,571 (25.4)
<i>Level 2 (13)</i>	8,379 (22.8)	8,092 (22.3)	8,168 (22.3)	8,209 (22.1)	8,454 (22.4)
<i>Level 2 Regional (4)</i>	4,557 (12.4)	4,608 (12.7)	4,465 (12.2)	4,582 (12.4)	4,646 (12.3)
<i>Level 2 Regional Neonatal (2)</i>	4,630 (12.6)	4,528 (12.5)	4,373 (11.9)	4,276 (11.5)	4,260 (11.3)
<i>Level 3 (3)</i>	9,948 (27.1)	9,772 (26.9)	10,299 (28.1)	10,189 (27.5)	10,240 (27.2)
<i>Total</i>	36,715	36,282	36,696	37,065	37,703 ¹⁷

Data sources used to develop this report:

- University of Iowa, Carver College of Medicine, Office of Statewide Clinical Education Programs and Obstetrical/Family Medicine Programs
- Iowa Department of Public Health, Bureau of Vital Records and Health Statistics
- United States Census Bureau, Iowa Population Estimates 2014
- Des Moines University – College of Osteopathic Medicine
- Iowa Board of Nursing

¹⁵ Number of hospitals per level is based on 2014 data

¹⁶ Includes home births and births that occurred outside of hospital

¹⁷ Resident births that occurred out of state were excluded from this report.

County	Urban/Rural Designation	Obstetricians & Gynecologists	Family Medicine physicians	Other and unspecified physicians	CNM/ARNP
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Table 11: Number of births by maternal resident county and selected licensed provider type, 2014¹⁸
Values of 3 or less are suppressed to protect resident confidentiality and are indicated by a dash (-).

Adair	R	48	10	6	-
Adams	R	16	12	7	12
Allamakee	R	0	132	-	14
Appanoose	R	57	31	21	14
Audubon	R	12	33	9	-
Benton	U	235	21	23	7
Black Hawk	U	1,317	53	15	381
Boone	R	228	12	-	25
Bremer	U	215	5	4	42
Buchanan	R	205	19	-	46
Buena Vista	R	20	249	51	-
Butler	R	126	-	-	26
Calhoun	R	52	55	10	-
Carroll	R	78	161	6	-
Cass	R	19	40	47	4
Cedar	R	150	10	12	16
Cerro Gordo	R	440	30	-	-
Cherokee	R	13	122	-	0
Chickasaw	R	58	46	-	17
Clarke	R	86	13	10	-
Clay	R	10	179	8	0
Clayton	R	52	85	9	13
Clinton	R	450	13	11	63
Crawford	R	104	99	6	6
Dallas	U	1,068	18	51	77
Davis	R	65	17	12	0
Decatur	R	40	24	10	10
Delaware	R	86	86	15	15
Des Moines	R	398	4	9	50
Dickinson	R	20	96	30	0
Dubuque	U	1,016	42	5	145
Emmet	R	5	45	51	0
Fayette	R	98	53	8	41
Floyd	R	98	43	22	7
Franklin	R	120	7	-	-
Fremont	R	28	-	0	-
Greene	R	70	18	-	6
Grundy	U	97	5	1	25
Guthrie	U	96	10	7	-
Hamilton	R	117	28	11	61
Hancock	R	93	16	0	4

¹⁸ Excludes resident physicians (n= 744) and unlicensed persons (n=361).

County	Urban/Rural Designation	Obstetricians & Gynecologists	Family Medicine physicians	Other and unspecified physicians	CNM/ARNP
Hardin	R	114	48	7	24
Harrison	U	29	17	0	5
Henry	R	161	45	5	16
Howard	R	6	64	6	-
Humboldt	R	72	22	0	6
Ida	R	25	35	-	0
Iowa	R	158	15	6	10
Jackson	R	150	4	8	32
Jasper	R	212	161	32	15
Jefferson	R	108	15	21	-
Johnson	U	1,260	229	150	143
Jones	U	154	25	15	7
Keokuk	R	85	15	12	-
Kossuth	R	33	115	4	-
Lee	R	359	8	16	6
Linn	U	1,876	262	237	59
Louisa	R	119	14	6	18
Lucas	R	46	43	6	8
Lyon	R	-	36	-	-
Madison	U	119	5	7	9
Mahaska	R	105	109	75	0
Marion	R	105	165	86	8
Marshall	R	487	24	6	19
Mills	U	45	5	0	20
Mitchell	R	60	9	-	-
Monona	R	32	44	5	-
Monroe	R	38	34	16	0
Montgomery	R	46	39	-	-
Muscatine	R	346	40	19	152
O'Brien	R	4	123	13	0
Osceola	R	-	37	5	-
Page	R	80	13	-	-
Palo Alto	R	5	87	-	-
Plymouth	R	114	149	23	0
Pocahontas	R	30	29	-	0
Polk	U	5,562	319	417	441
Pottawattamie	U	424	53	-	185
Poweshiek	R	68	77	27	6
Ringgold	R	19	11	5	5
Sac	R	29	84	4	-
Scott	U	1,407	83	172	492
Shelby	R	23	58	-	8
Sioux	R	18	328	67	13
Story	U	667	14	15	202
Tama	R	186	23	7	16

County	Urban/Rural Designation	Obstetricians & Gynecologists	Family Medicine physicians	Other and unspecified physicians	CNM/ARNP
Taylor	R	22	9	7	6
Union	R	41	57	28	11
Van Buren	R	62	-	7	-
Wapello	R	266	67	106	-
Warren	U	476	23	22	33
Washington	U	253	26	17	15
Wayne	R	13	33	7	17
Webster	R	403	15	6	17
Winnebago	R	71	10	0	-
Winneshiek	R	840	134	-	7
Woodbury	U	54	434	118	11
Worth	R	54	4	0	0
Wright	R	91	57	-	4