Access to Obstetrical Care in Iowa:

A Report to the Iowa State Legislature - Calendar year 2019

Division of Health Promotion & Chronic Disease Prevention - Bureau of Family Health

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Introduction

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

16. Consult with the Office of Statewide Clinical Education Programs at the University of Iowa Carver 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 Carver College of Medicine and the Des Moines University College of Osteopathic Medicine entering into residency programs in obstetrics& gynecology, and family medicine. The report may include additional data relating to access to obstetrical services that may be available.

Report to the 2021 Legislature

The Iowa Department of Public Health (IDPH), Division of Health Promotion & Chronic Disease Prevention, Bureau of Family Health, respectfully submits this report in response to the legislative mandate. The data summarized in this report provide an overview of the obstetrical workforce in Iowa for calendar years 2015 through 2019.

This report uses birth certificate data to generate the number and percent of licensed providers who provide deliveries in our state. Birth certificate data are linked to data from the University of Iowa-Carver College of Medicine-Office of Statewide Clinical Education Programs (OSCEP) 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 MD or DO degree and has completed a four-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 MD or DO degree and has completed a three-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.)
- Certified Nurse-Midwives CNMs are advanced practice nurses, registered both as nurses and as midwives. They have completed at least a baccalaureate program and a midwifery education program in addition to having passed a national certification examination to become licensed. In Iowa they have the ability to write prescriptions. CNMs tend to care for pregnant women at low risk for adverse maternal and newborn outcomes. Most have a physician back up if complications arise.

- A resident is a physician (one who holds the degree of MD or DO) who practices medicine usually in a hospital or clinic under the direct or indirect supervision of an attending physician.

National Data[1]

- According to Rayburn[2] (2017), there were 4.5 obstetricians-gynecologists per 10,000 women of reproductive age[3] in the United States. In the same publication, Rayburn reported that there were 3.3 obstetricians-gynecologists per 10,000 WRA in Iowa.

2019 Iowa Population and Provider Information

- 2019 estimated total Iowa population: 3,155,070[4]
- 2019 estimated Iowan women of reproductive age: 594,283[3]

Table 1. Rate of physicians per 10,000 women of reproductive age, 2015-2019

Year	Physicians[5]	Obstetricians-Gynecologists
2019	9.9	4.1
2018	10.7	4.2
2017	10.5	4.1
2016	11.4	4.1
2015	11.5	3.9

Table 2. Count of unique licensed providers who delivered at least one infant, Iowa 2015-2019

	2015	***2016***	***2017***	***2018***	***2019***
Provider Type	***Count of Providers***				
Obstetricians & Gynecologists	231	245	244	252	243
Family Medicine	370	350	311	324	294
Other Physicians	76	76	66	59	53
Residents[6]	48	62	88	47	52
CNM/ARNP	74	79	76	91	90
Total	799	812	785	773	732

[1] The rates reported by the Rayburn report differ from those in this report because the report methods differ.
[2] Rayburn WF. *The Obstetrician-Gynecologist Workforce in the United States: Facts, Figures, and Implications, 2017*. The Office of Workforce Studies and Planning of the American Congress of Obstetricians and Gynecologists: Washington D.C.
[3] Women of reproductive age are defined as women between the ages of 14 and 44.
[4] U.S Census Bureau – accessed 12.08.20 via IDPH Public Health Tracking Portal
[5] The total number of delivering physicians includes obstetricians, family medicine physicians and other types of physicians. It excludes resident physicians.
[6] Number may underestimate true count because supervising physician may be reported as delivery provider

Table 3. Count and percent of deliveries by provider type, Iowa, 2015 -2019

Year	***2015***	***2016***	***2017***	***2018***	***2019***
Provider Type	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
Obstetricians & Gynecologists	27,171 (68.8)	26,909 (68.8)	26,552 (69.4)	26,117 (69.4)	26,213 (69.8)
Family Medicine	6,721 (17.0)	6,351 (16.3)	5,885 (15.4)	5,805 (15.4)	5,498 (14.6)
Other Physician[7]	1,578 (4.0)	1,363 (3.5)	1,059 (2.8)	955 (2.5)	892 (2.4)
Residents	292 (0.7)	418 (1.1)	486 (1.3)	235 (0.6)	405 (1.1)
CNM/ARNP	3,433 (8.7)	3,691 (9.4)	3,923 (10.3)	4,109 (10.9)	4,095 (10.9)
Unlicensed other[8]	294 (0.8)	344 (0.9)	361 (0.9)	420 (1.1)	454 (1.2)
Total	39,489	39,076	38,266	37,641	37,577

See **Figure 3** for the percent of deliveries by general obstetrician & gynecologist physicians by county population size for calendar year 2019. See **Figure 4** for the percent of deliveries by family medicine physicians by county population size for calendar year 2019. See **Figure 5**[9] for the percent of deliveries by nurse midwives by county population size for calendar year 2019.

Rurality is based on the National Center for Health Statistics designations. These designations focus on access to service for the county population, as opposed to only the number of people residing in the county. For more information see the 2013 NCHS Urban-Rural Classification Scheme for Counties. Readers can also find more information at the State Library of Iowa's State Data Center, Metropolitan, Micropolitan, and Combined Statistical Areas.

Please note: Figures 3 through 5 represent occurrent births. Occurrent births are those that occurred in Iowa regardless of the mother's residence. Resident births, presented in Figure 2 are births to Iowa residents that occurred in Iowa.

[7] Other physicians include maternal/fetal medicine specialists, emergency room physicians and general surgeons (who may perform cesarean sections for family medicine patients) as well as those without an identifiable specialty.
[8] Unlicensed persons such as lay midwives, registered nurses, EMT staff, and family members
[9] Figures 3 through 5 exclude deliveries by other physicians, residents, and unlicensed persons.

Table 4. Demographic information for unique licensed providers who delivered at least one infant, Iowa 2019

Provider Type	*Provider Count*	*Avg. Age, Delivering Males*	*Avg. Age Delivering Females*	*% Delivery Providers, Male*	*% Delivery Providers, Female*
Obstetricians & Gynecologists	243	54.6	42.4	37.9	62.1
Family Medicine	294	43.6	38.8	56.1	43.9
Other Physicians[10]	53	50.8	45.0	75.5	24.5

Table 5. University of Iowa, Carver College of Medicine, Obstetrics & Gynecology and Family Medicine Residency Programs, June 30, 2020[11]

Specialty	*Total # Residents Graduating in June 2020*	*Total # Continuing Education (Specializing)*	*Total # Entering Practice*	*Total # (%) entering an Iowa Practice*
Obstetrics & Gynecology	5	4	1	0
Family Medicine[4]	60	8	50	28 (56%)

[10] Includes maternal/fetal medicine specialists, emergency room physicians and general surgeons, and unspecified other physicians; excludes resident physicians.
[11] University of Iowa Graduate Medical Education Program

Table 6. Iowa medical school May 2020 graduates obtaining a residency position in obstetrics & gynecology (OBGYN) or family medicine (FM) through the National Resident Matching Program[12]

University	*# Students Matching in OB-Gyn Residency*	*# Students Matching in UI OB-Gyn Residency Program*	*# Students Matching in Family Medicine Residency*	*# Students Matching in an Iowa Based FM Residency Program*
U of I Carver College of Medicine	11	2 (18%)	15	5 (33%)
Des Moines University of Osteopathic Medicine	10	0	58	13 (22%)

Table 7. Family Medicine Residents by Location and Year, July 2019 – June 2020[13]

Residency Location	*1st Year*	*2nd Year*	*3rd year*	*Total*
Cedar Rapids Medical Education	7	7	7	21
Genesis Health System - Davenport	6	6	6	18
Broadlawns Medical Center - Des Moines	8	8	8	24
MercyOne Medical Center – Des Moines	8	8	8	24
UnityPoint - Iowa Lutheran – Des Moines	6	6	6	18
University of Iowa Hospitals and Clinics	6	6	6	18
MercyOne Medical Center - Mason City	6	6	6	18
Siouxland Medical Education Foundation – Sioux City	6	6	6	18
Northeast Iowa Medical Education Foundation – Waterloo	6	6	6	18
Total	**59**	**59**	**59**	**177**

Table 8. Obstetrics & Gynecology Residents by Location and Year, July 2019 – June 2020[14]

Residency Location	*1st Year*	*2nd Year*	*3rd Year*	*4th Year*	*Total*
University of Iowa Hospitals and Clinics	5	5	5	5	**20**

[12] Data sources - University of Iowa 2020 Match Results and Des Moines University 2020 Match Results
[13] Data obtained from publicly available organizational websites.
[14] Data source: University of Iowa Graduate Medical Education Program

Table 9: Occurrent Births by Hospital Level of Care, 2015-2019

	2015	***2016***	***2017***	***2018***	***2019***
OB Level (# of hospitals)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
Home births	432 (1.1)	549 (1.4)	500 (1.3)	560 (1.5)	533 (1.4)
Level 1 (39)	9,746 (24.7)	9,625 (24.6)	9,134 (23.9)	8,487 (22.6)	8,964 (23.9)
Level 2 (12)	8,964 (22.7)	8,988 (23.0)	9,058 (23.7)	8,932 (23.7)	8,829 (23.5)
Level 2 Regional (4)	5,300 (13.4)	5,111 (13.1)	4,843 (12.7)	4,833 (12.8)	4,754 (12.7)
Level 2 Regional Neonatal (2)	4,690 (11.9)	4,333 (11.1)	4,207 (11.0)	4,275 (11.4)	4,336 (11.6)
Level 3 (3)	10,351 (26.2)	10,488 (26.8)	10,542 (27.5)	10,554 (28.0)	10,141 (27.0)
Total	39,483	39,094	38,284	37,641	37,557

Maternity unit closures

Between the years 2000 and 2020, 40 community level hospitals discontinued their maternity services. Figure 1 provides county level distribution of maternity services. IDPH in partnership with OSCEP and the faculty at the University of Iowa - Carver College of Medicine have examined Iowans' access to prenatal care (PNC). These results suggest that women's access to PNC is generally preserved with a high proportion of women who initiated PNC during their first trimester. See Figure 2 for the percent of women who initiated PNC during their first trimester by county level availability maternity delivery services.

The Iowa Maternal Health Innovation Program

In September of 2019, IDPH was awarded a State Maternal Health Innovation Support and Implementation Program grant from the Health Resources and Services Administration. The grant's goals over a five-year period are to improve maternal access to maternity services and their health outcomes. The grant goal's will be accomplished through workforce development, an improved maternal mortality review process, improved data collection and surveillance, provision of technical support and quality improvement initiatives to existing hospitals with maternity services, and increased alignment with the state Maternal and Child Health Title V program. A brief summary of current grant activities and accomplishments are presented in Appendix A.

Appendix A

The Iowa Maternal Health Innovation Program – Workforce development

An important aspect of maternal access to services is workforce development. The following workforce development strategies are underway as a result of this grant:

- The University of Iowa Department of Obstetrics and Gynecology has obtained approval from the Accreditation Council of Graduate Medical Education to create a rural track OB/GYN residency program.
- The University of Iowa Department of Obstetrics and Gynecology is also working to create family medicine/OB fellowships to train family medicine physicians to do c-sections and other advanced OB training. This is of critical importance for rural Iowa to be able to continue to provide OB care.
- The University of Iowa has also established a rural OB/GYN residency track and will match the first resident in the upcoming match cycle.
- The University of Iowa completed a needs assessment and feasibility study for a nurse-midwifery education program at the University. The results strongly support the development of a midwifery program and work is underway to establish this program

The Iowa Maternal Health Innovation Program – Maternal Mortality Review

Maternal mortality review committees are critical to understand the causes of maternal mortality and to make recommendations to prevent future maternal deaths. Iowa's Maternal Mortality Review Committee (MMRC) has been in existence since the 1950s and is currently conducted in partnership between IDPH and the Iowa Medical Society. The following changes are being initiated to improve data collection and analysis:

- The MMRC will meet on an annual basis, rather than every three years.
- Following the recommendations of the Centers for Disease Control and Prevention (CDC), the MMRC is transitioning from a clinical provider team to a multidisciplinary team
- The MMRC team is transitioning data collection and analysis to the CDC developed data system called the Maternal Mortality Review Information Application (MMRIA). The data system is designed to facilitate MMRC's use of standardized data collection and organize available data to better identify and assess maternal mortality cases.
- In collaboration with the Association of Women's Health, Obstetrics and Neonatal Nurses, nurses at all of Iowa's birthing hospitals and nurses at 23 IDPH Title V Maternal and Child Health agencies will receive training to teach families how to identity POST-BIRTH Warning Signs. Early identification of these health distress conditions have been shown to reduce maternal morbidity and mortality.
- In collaboration with the Department of Transportation, Zero Fatalities, the Governor's Traffic Safety Bureau, and Safe Kids Iowa, IDPH ran a statewide social media campaign to remind pregnant and postpartum women that seat belts are safe for mom and safe for

baby. The campaign ran from July 1, 2020 through Sept. 30, 2020, garnering national attention.

The Iowa Maternal Health Innovation Program – Iowa Maternal Quality Care Collaborative (IMQCC)

- The IMQCC is a multidisciplinary group of key stakeholders for maternal health including healthcare providers, public health officials, payers, statewide partners, and patient and community representatives. The IMQCC held its first meeting in May of 2020.
- Its mission is to improve the quality, safety, and culture of maternity care provision by engaging with our healthcare and community partners, supporting data-driven and evidence-informed quality improvement initiatives, and promotion of patient- and family-centered care in Iowa.
- A key strategy of the IMQCC will be to participate in AIM (Alliance for Innovation on Maternal Health). Iowa was accepted to be an AIM state in October of 2020. The AIM program provides implementation and data support for the adoption of evidence-based patient safety bundles. AIM works through state teams and health systems to align national, state, and hospital level quality improvement efforts to improve overall maternal health outcomes.
- Iowa's AIM Kick-off meeting is scheduled for January 28 and 29, 2021. Iowa has selected "Safe Reduction of Primary Cesarean Birth" as its first patient safety bundle.

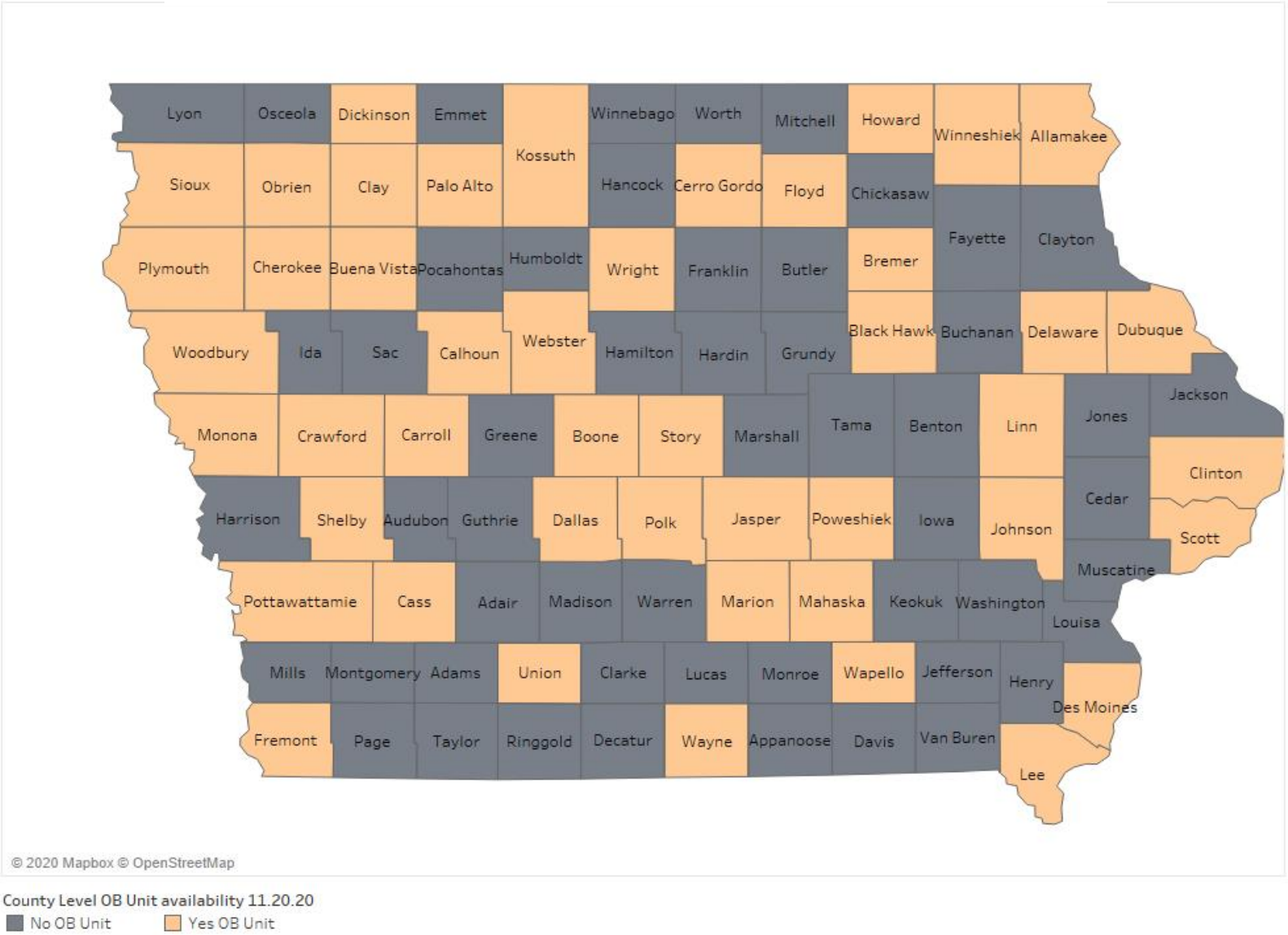
The Iowa Maternal Health Innovation Program – Data collection, surveillance, and research

- IDPH in collaboration with key stakeholders is developing a data dashboard to support the AIM project. The dashboard will include key baseline outcome variables by hospital and hospital volume. Hospitals will be able to monitor their progress with dashboard data updates.
- To improve data quality and utility, several data variables will undergo validity and reliability assessments, for example, a comparison of the conditions of severe maternal morbidity reported on the birth certificate, the hospital discharge data, and hospital records.
- Key research projects in population health
    - Temporal trends in infant and maternal outcomes by sociodemographic and geographic characteristics, 2007-2019
    - Characterizing disparities in prenatal care and pregnancy outcomes by race/ethnicity, socioeconomic status and rurality
    - Examine potential effects on rural women's access to maternity care with closure of community level hospital OB Units
    - Data support for IMQCC and AIM bundles including state and hospital level outcomes relative to selected AIM bundles

- Access the maternity care in rural Iowa

- In 2020, over 50% (53%; n= 53) of counties in Iowa do not have obstetrical services (OB). Loss of OB services can lead to delays in access to prenatal care, an increase in unplanned out of hospital births and longer travel time to obtain delivery services.
- Researchers are examining these trends as well as how these changes may affect maternal and newborn health outcomes.

Figure 1. Availability of obstetrical units by county, updated 11.20.20



County Level OB Unit availability 11.20.20

No OB Unit Yes OB Unit

Figure 2. Percent of women who initiated prenatal care during their first trimester, by county level availability of OB units, resident births, Iowa 2019

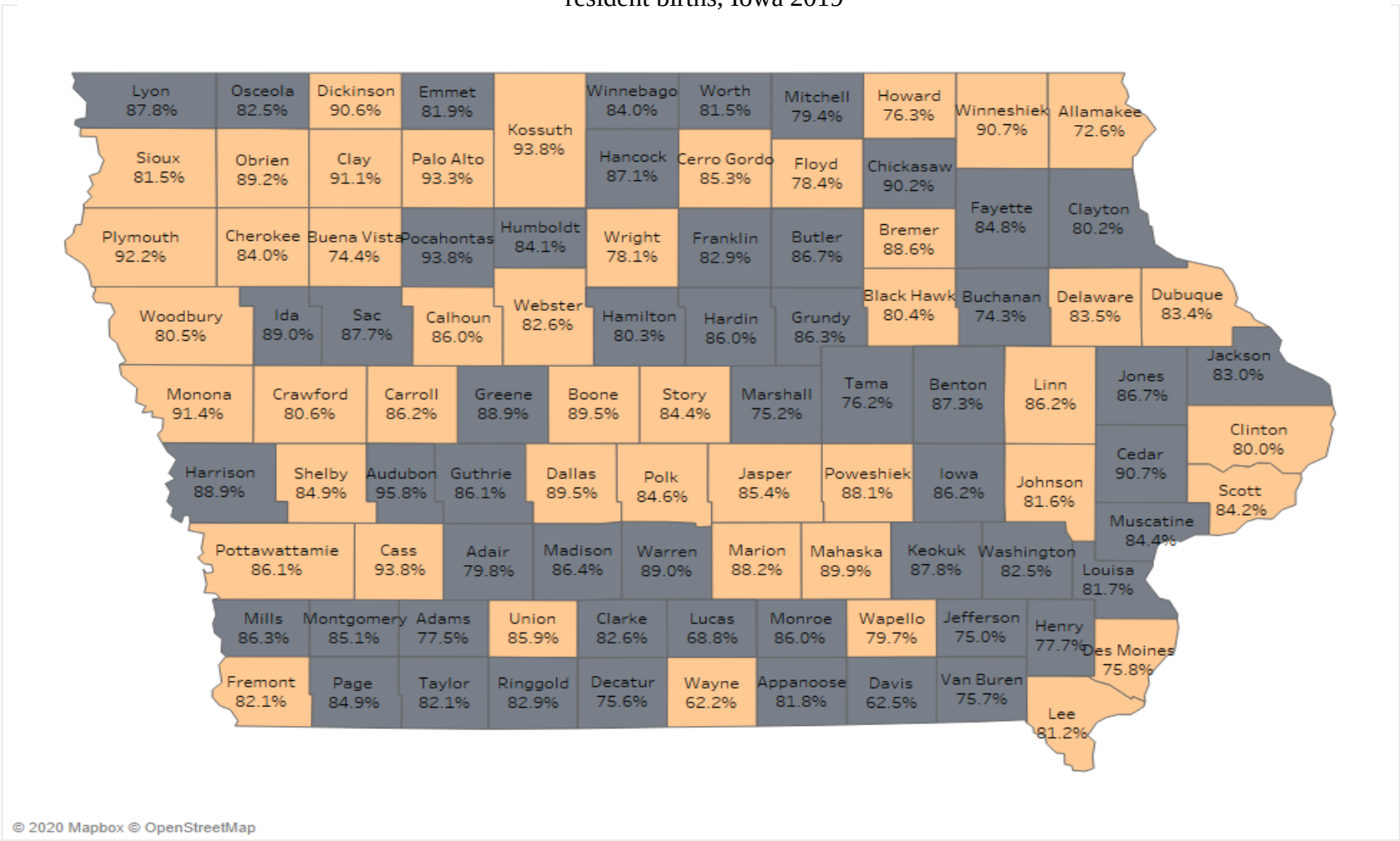


Figure 3. Percent of deliveries provided by OB/GYN physicians, by county population size, occurrent births, Iowa calendar year 2019 (There were no deliveries in counties with no reported values)

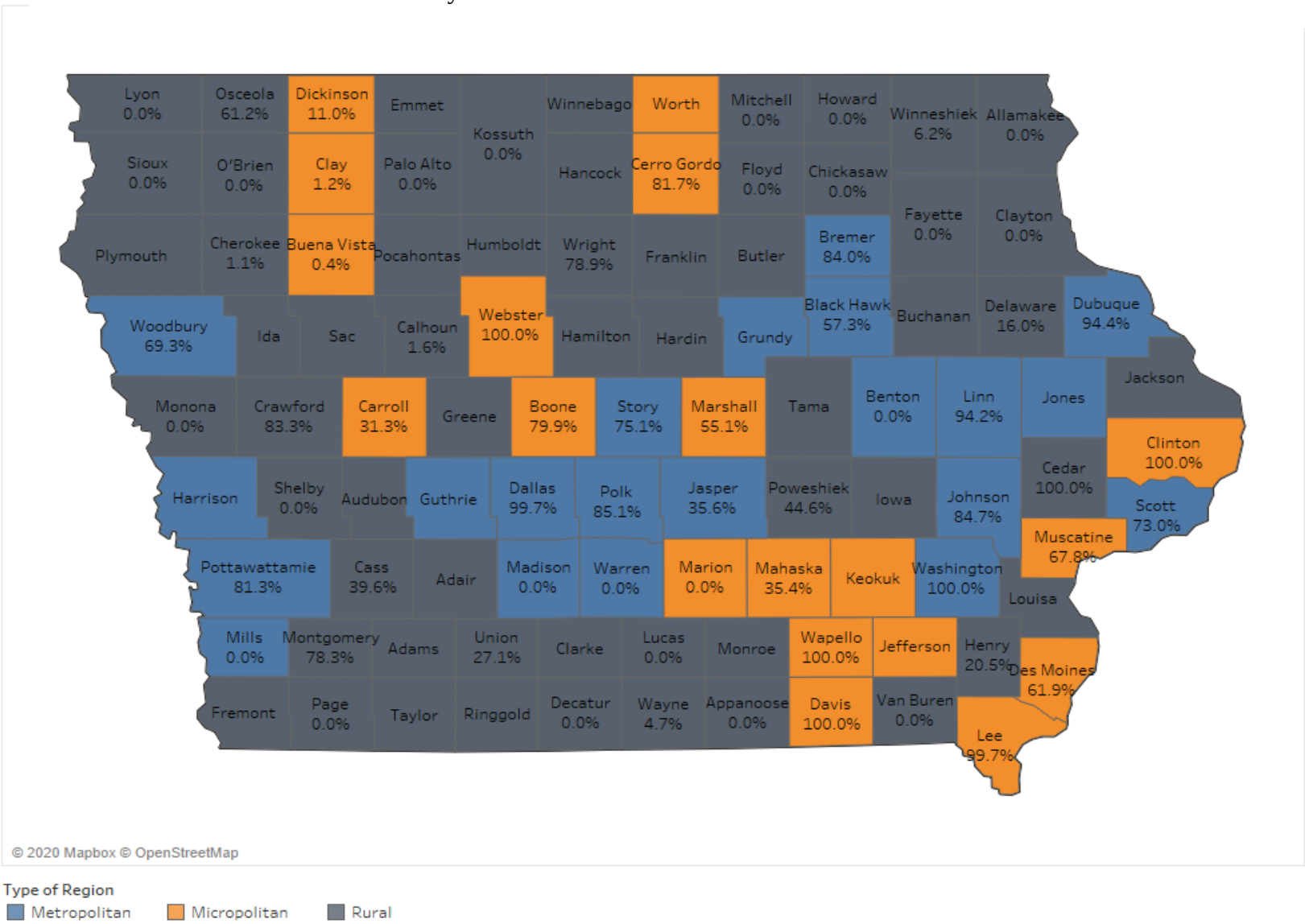


Figure 4. Percent of deliveries provided by Family Medicine physicians, by county population size, occurrent births, Iowa calendar year 2019 (There were no deliveries in counties with no reported values)

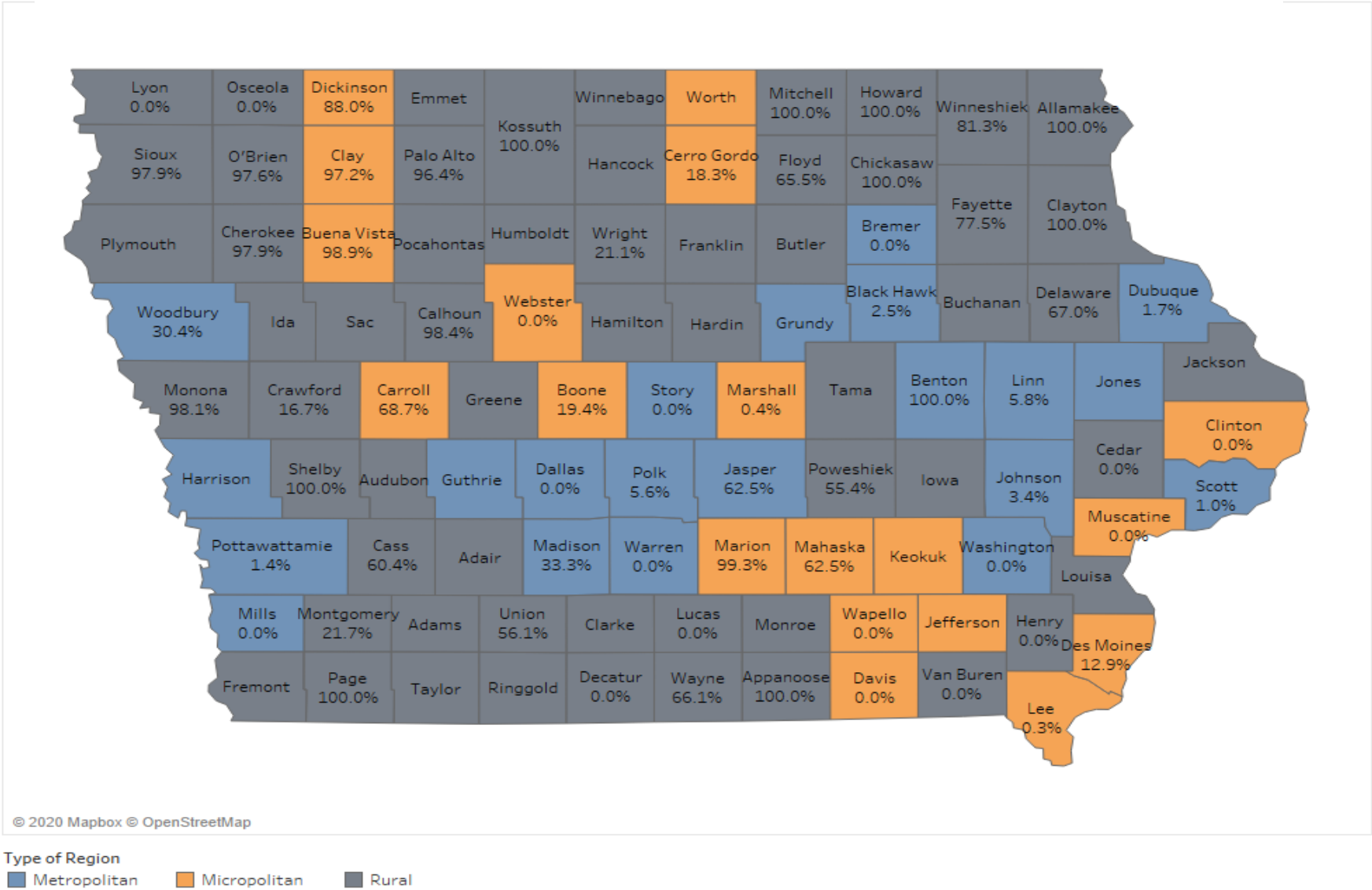
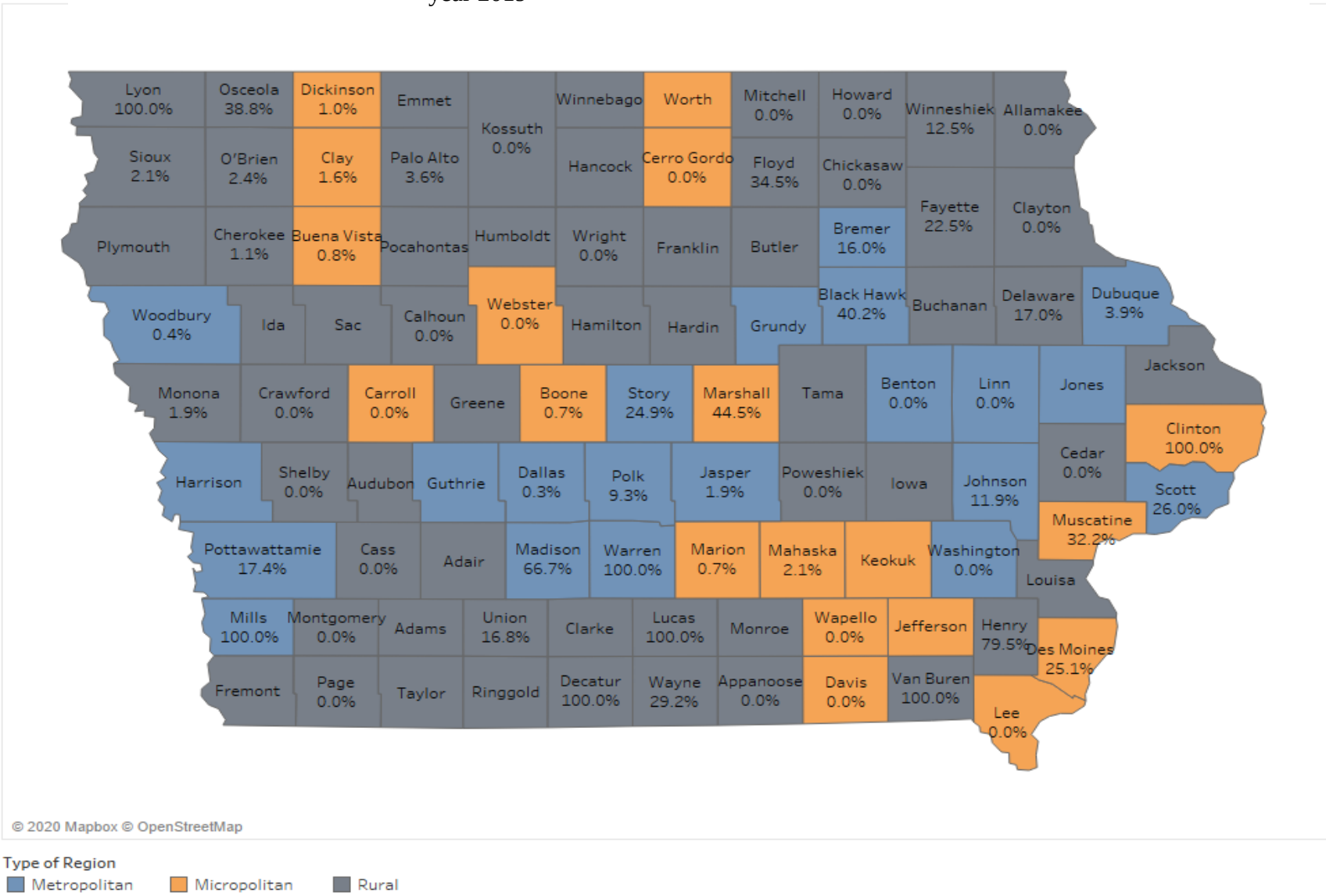



Figure 5. Percent of deliveries provided by Nurse Midwives, by county population size, occurrent births, Iowa calendar year 2019 (There were no deliveries in counties with no reported values)