

**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.

2014 Report to the 2015 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 2009 through 2013.

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:

Throughout this paper different provider types which perform deliveries are reviewed, 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 Practice do not perform surgical deliveries (cesarean sections.)
- An ARNP/CNM (Advanced Registered Nurse Practitioner/Certified Nurse Midwife) has a M.S.N. (Master of Science in Nursing) degree. These providers are registered nurses who have completed a midwifery education program and pass a national certification examination. CNMs tend to care for low-risk pregnant women. Most have a physician as back up if complications arise. CNMs do not do operative deliveries.

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National Data

- According to Rayburn¹ and colleagues (2012), based on 2010 data there were 5.39 OBGYNs 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 4.18 OBGYNs per 10,000 WRA.
 - A limitation of the Rayburn estimation is that the total number of ACOG members were used as a proxy for delivering physicians. Not all obstetricians/gynecologists are members of ACOG, and not all ACOG members are actively delivering babies.

2013 Iowa Population and Provider Information

Following are select population estimates for the state of Iowa, calendar year 2013:

- Estimated total population: 3,090,416 (*US Census Bureau*)
- Women of Reproductive Age (WRA), 15-44: 582,884 (*US Census Bureau*)
- Based on Iowa birth certificate data – delivering physicians per 10,000 WRA: 8.5 : 10,000 (*Table 7, WRA*)
 - The total number of delivering physicians includes obstetricians, family medicine physicians, general surgeons (doing cesarean sections for family medicine patients) and emergency room physicians.
 - There is no national data to compare total number of delivering physicians by state.
- Number of OBGYNs per 10,000 WRA: 3.3 : 10,000 (*Table 7, WRA*)
 - The birth certificate data differs from the Rayburn data above because not all licensed obstetrician/gynecologists perform deliveries. Because of the differences in methodologies, the Iowa rate in this report is not directly comparable with the Rayburn data.
- Greatest number of deliveries by one provider: 349
- Greatest delivery plurality: 3 (triplets)

Table 1: Iowa Physician Demographic Information, 2013

<i>Provider Type</i>	<i>Avg. Age, Delivering Males</i>	<i>Avg. Age Non-Deliv. Males</i>	<i>Avg. Age Delivering Females</i>	<i>Avg. Age Non-Deliv. Females</i>	<i>% Delivery Providers, Male</i>	<i>% Delivery Providers, Female</i>
<i>Obstetricians & Gynecologists</i>	53.0	55.6	43.5	48.3	51.5%	48.5%
<i>Family Medicine</i>	43.6	51.9	50.3	45.3	53.0%	47.0%
<i>Other Physicians*</i>	50.3	46.6	46.1	49.1	60.9%	39.1%

*Includes: Internal Medicine, General Pediatrics, General Surgery, and Unspecified 'Other' Physician
Source: Office of Statewide Clinical Education Programs, University of Iowa Carver College of Medicine

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.

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

<i>Specialty</i>	<i>2014 Residents (Res. Year)</i>	<i>2013 Alumni</i>	<i>2013 Iowa residency graduates staying in Iowa to practice</i>
<i>Obstetricians & Gynecologists</i>	20 (2014-18)	5	4
<i>Family Medicine</i>	22 (2014-18)	6	3

Table 3: Iowa Medical School Graduates Entering Obstetrics & Gynecology and Family Medicine Residency, 2014

<i>University</i>	<i>OBGYN Residency Placements</i>	<i>OB Iowa Residency Placement</i>	<i>FM Residency Placement</i>	<i>FM Iowa Residency Placement</i>
<i>U of I Carver College of Medicine*</i>	10	1/10 (10%)	16	4/16 (25%)
<i>Des Moines University of Osteopathic Medicine</i>	13	0/13 (0%)	71	19/71 (27%)

Table 4: Current Supply of Family Medicine Residents by Location and Year, 2014

<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	6	6	19
<i>Genesis Health System</i>	6	7	6	19
<i>Broadlawns Medical Center</i>	8	9	7	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>	9	3	8	20
<i>Mercy Medical Center (Mason)</i>	9	6	6	18
<i>Siouxland Med. Education Fnd.</i>	6	7	5	18
<i>Northeast Iowa Med. Ed. Fnd.</i>	7	5	8	20
<i>Total</i>	63	57	60	180

Table 5: Number of Obstetrics & Gynecology Residents by Location & Year, 2014

<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

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Table 6: Total Deliveries by Specialty Type, 2009-2013

<i>Provider Type</i>	<i>2009 (%)</i>	<i>2010 (%)</i>	<i>2011 (%)</i>	<i>2012 (%)</i>	<i>2013 (%)</i>
<i>Obstetricians & Gynecologists</i>	20,669 (54.8)	20,916 (56.7)	20,805 (57.3)	21,632 (58.9)	22,377 (60.4)
<i>Family Medicine</i>	3,586 (9.5)	3,508 (9.6)	3,525 (9.7)	3,601 (9.8)	3,847 (10.4)
<i>Other Physician²</i>	8,434 (22.3)	7,803 (21.3)	7,799 (21.5)	8,196 (22.3)	8,169 (22.0)
<i>CNM/ARNP</i>	1,698 (4.5)	1,852 (5.0)	2,128 (5.9)	2,322 (6.3)	2,516 (6.7)
<i>Other³</i>	177 (0.5)	206 (0.6)	193 (0.5)	163 (0.4)	156 (0.4)
<i>Unspecified</i>	3,369 (8.9)	2,636 (7.2)	2,025 (5.6)	945 (2.6)	0 ⁴
<i>Total</i>	37,756*	36,715*	36,282*	36,696*	37,065*

*Resident births that occurred out of state were excluded for this report; therefore, the numbers will differ from the total number of annual resident births reported by the Bureau of Health Statistics.

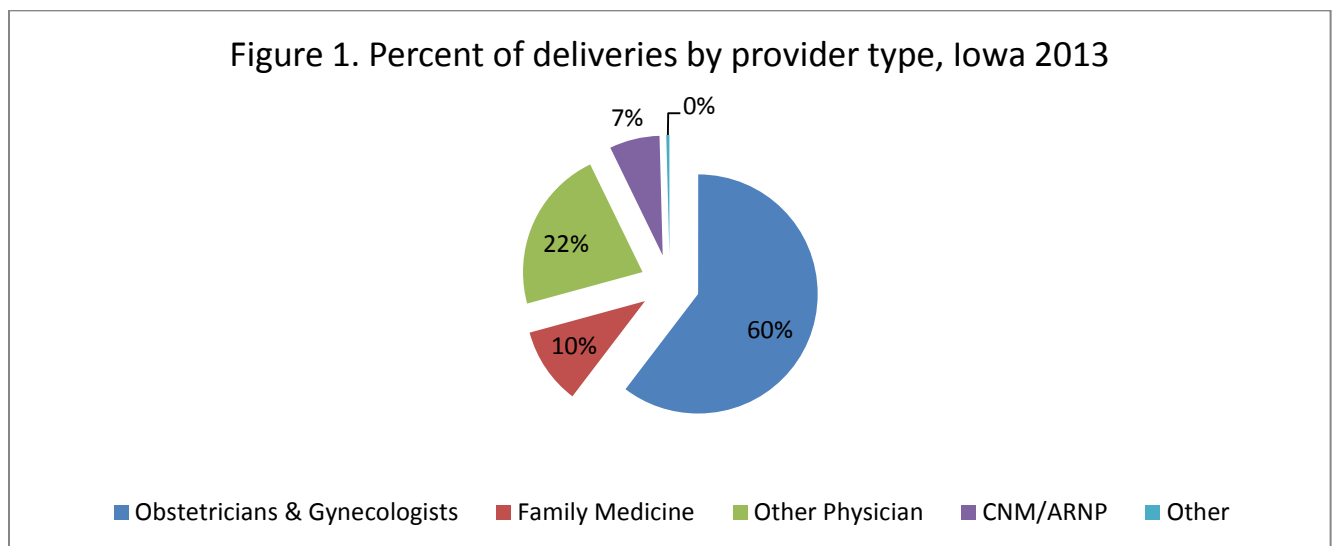


Table 7: Births by Urban/Rural Status*, 2009-2013

<i>County Status</i>	<i>2009 (%)</i>	<i>2010 (%)</i>	<i>2011 (%)</i>	<i>2012 (%)</i>	<i>2013 (%)</i>
<i>Urban</i>	22,930 (60.7)	22,378 (69.9)	22,104 (60.9)	22,483 (61.3)	22,747 (61.4)
<i>Rural</i>	14,826 (37.3)	14,337 (30.1)	14,178 (39.1)	14,213 (38.7)	14,318 (38.6)
<i>Total</i>	37,756	36,715	36,282	36,696	37,065

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

² Other Physician includes Emergency Room Physicians, General Surgeons (who often do cesarean sections for family medicine patients) and other providers.

³ Includes unspecified providers without recorded license information

⁴ As we refined our data collection and matching methods, we were able to reduce the number of unspecified providers to zero. We expect this number to remain low to none as we continue to use our new data collection and matching methods.

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Table 8: Providers Delivering Babies in Iowa by Rural/Urban Distribution, 2013

<i>Status</i>	<i>Obstetrics & Gynecology</i>	<i>Family Medicine</i>	<i>CNM (%)</i>
<i>Urban</i>	120 (61.5%)	130 (49.6%)	35 (59.3)
<i>Rural</i>	75 (38.5)	132 (50.4%)	24 (40.7)
<i>Totals</i>	195	262	59
<i>Urban/Rural Ratio</i>	1.60	0.985	1.4583

Table 9: Number of Delivery Providers by Specialty, 2009-2013

<i>Provider Type</i>	<i>2009 (%)</i>	<i>2010 (%)</i>	<i>2011 (%)</i>	<i>2012 (%)</i>	<i>2013 (%)</i>
<i>Obstetricians. & Gynecologists</i>	161 (27.7)	171 (30.1)	176 (31.4)	189 (33.2)	195 (35.0)
<i>Family Medicine</i>	196 (33.7)	205 (35.9)	209 (37.3)	235 (41.2)	262 (47.0)
<i>Other Physician</i>	22 (3.8)	23 (4.0)	27 (4.8)	31 (5.4)	41 (7.4)
<i>CNM/ARNP</i>	49 (8.4)	53 (9.3)	53 (9.6)	56 (9.8)	59 (10.6)
<i>Unspecified</i>	154 (26.4)	118 (20.7)	95 (16.9)	59 (10.4)	0 (0.0) ⁵
<i>Total</i>	582	570	560	570	557

Table 10: Births by Hospital OB Level, 2009-2013

<i>OB Level (# hospitals of that level in state)</i>	<i>2009 (%)</i>	<i>2010 (%)</i>	<i>2011 (%)</i>	<i>2012 (%)</i>	<i>2013 (%)</i>
<i>Out of Hospital Births**</i>	420 (1.1)	442 (1.2)	450 (1.2)	459 (1.3)	467 (1.3)
<i>Level 1 (54)</i>	8,944 (23.7)	8,759 (23.9)	8,832 (24.4)	8,932 (24.2)	9,342 (25.2)
<i>Level 2 (13)</i>	8,566 (22.7)	8,379 (22.8)	8,092 (22.3)	8,168 (22.3)	8,209 (22.1)
<i>Level 2 Regional (4)</i>	4,762 (12.6)	4,557 (12.4)	4,608 (12.7)	4,465 (12.2)	4,582 (12.4)
<i>Level. 2 Regional Neonatal (2)</i>	4,762 (12.6)	4,630 (12.6)	4,528 (12.5)	4,373 (11.9)	4,276 (11.5)
<i>Level 3 (3)</i>	10,302 (27.3)	9,948 (27.1)	9,772 (26.9)	10,299 (28.1)	10,189 (27.5)
<i>Total</i>	37,756*	36,715*	36,282*	36,696*	37,065*

*Resident births that occurred out of state were excluded for this report; therefore, the numbers will differ from the total number of annual resident births reported by the Bureau of Health Statistics.

**Out of hospital births include births at free standing birth centers and home births.

⁵ As we refined our data collection and matching methods, we were able to reduce the number of unspecified providers to zero. We expect this number to remain low to none as we continue to use our new data collection and matching methods.

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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 quality of perinatal care in our rural state. Our current system has 3 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.

Appendix A contains further information about the levels of care. For more specific information about Iowa’s Regionalized System of Care, refer to the Guidelines for Perinatal Services, 8th Edition, which can be found at: http://www.idph.state.ia.us/hpcdp/common/pdf/8th_edition_guidelines.pdf

Data sources use to develop this report:

- University of Iowa, Carver College of Medicine, OSCEP & OB/FM Programs
- Iowa Department of Public Health, Bureau of Vital Records and Health Statistics
- United States Census Bureau, Iowa Population Estimates 2013
- Des Moines University of Osteopathic Medicine
- National Resident Swap Program
- Iowa Board of Nursing

Table 11: Number of Births by County and Provider Type, 2013

<i>County</i>	<i>Urban/ Rural</i>	<i>Physician: Ob & Gyn</i>	<i>Physician: Family Med.</i>	<i>CNM</i>	<i>Physician: Other</i>
<i>Adair</i>	R	.	.	.	.
<i>Adams</i>	R	.	.	.	.
<i>Allamakee</i>	R	.	48	.	94
<i>Appanoose</i>	R	50	.	.	*
<i>Audubon</i>	R	.	.	.	*
<i>Benton</i>	U	*	.	*	*
<i>Black Hawk</i>	U	1626	53	437	280
<i>Boone</i>	R	107	.	*	46
<i>Bremer</i>	U	178	.	*	72
<i>Buchanan</i>	R	.	*	*	30
<i>Buena Vista</i>	R	.	312	.	51
<i>Butler</i>	R
<i>Calhoun</i>	R	.	69	.	13
<i>Carroll</i>	R	125	194	.	60

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<i>Cass</i>	R	55	.	.	76
<i>Cedar</i>	R	.	.	*	.
<i>Cerro Gordo</i>	R	869	23	.	26
<i>Cherokee</i>	R	.	18	.	139
<i>Chickasaw</i>	R	.	21	.	22
<i>Clarke</i>	R	.	.	.	*
<i>Clay</i>	R	.	114	.	178
<i>Clayton</i>	R	.	14	.	22
<i>Clinton</i>	R	173	.	.	171
<i>Crawford</i>	R	46	82	.	13
<i>Dallas</i>	U	551	*	8	22
<i>Davis</i>	R	.	5	.	41
<i>Decatur</i>	R	.	.	.	*
<i>Delaware</i>	R	.	102	.	74
<i>Des Moines</i>	R	417	.	69	12
<i>Dickinson</i>	R	17	30	*	62
<i>Dubuque</i>	U	849	20	148	359
<i>Emmet</i>	R	.	.	.	64
<i>Fayette</i>	R	.	67	20	4
<i>Floyd</i>	R	.	43	.	46
<i>Franklin</i>	R	.	.	.	.
<i>Fremont</i>	R	.	.	.	.
<i>Greene</i>	R	.	.	21	46
<i>Grundy</i>	U	.	.	*	*
<i>Guthrie</i>	U	.	.	.	*
<i>Hamilton</i>	R	.	43	32	50
<i>Hancock</i>	R
<i>Hardin</i>	R	*	17	.	60
<i>Harrison</i>	U	.	.	.	*
<i>Henry</i>	R	51	61	*	12
<i>Howard</i>	R	.	13	*	45
<i>Humboldt</i>	R

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<i>County</i>	<i>Urban/ Rural</i>	<i>Physician: Ob & Gyn</i>	<i>Physician: Family Med.</i>	<i>CNM</i>	<i>Physician: Other</i>
<i>Ida</i>	R	.	.	.	.
<i>Iowa</i>	R	.	.	*	*
<i>Jackson</i>	R	.	.	*	4
<i>Jasper</i>	R	.	88	5	65
<i>Jefferson</i>	R	.	*	*	11
<i>Johnson</i>	U	1842	157	221	899
<i>Jones</i>	U	.	.	.	*
<i>Keokuk</i>	R	.	.	.	*
<i>Kossuth</i>	R	*	59	.	65
<i>Lee</i>	R	392	.	.	*
<i>Linn</i>	U	2640	321	20	255
<i>Louisa</i>	R	.	.	.	.
<i>Lucas</i>	R	.	31	*	22
<i>Lyon</i>	R	.	.	*	.
<i>Madison</i>	U	.	.	*	.
<i>Mahaska</i>	R	68	15	.	111
<i>Marion</i>	R	23	129	*	323
<i>Marshall</i>	R	537	.	*	*
<i>Mills</i>	U	.	.	.	*
<i>Mitchell</i>	R	.	*	.	13
<i>Monona</i>	R	.	33	.	15
<i>Monroe</i>	R	.	.	.	*
<i>Montgomery</i>	R	.	.	.	70
<i>Muscatine</i>	R	73	.	146	134
<i>O'Brien</i>	R	.	138	.	*
<i>Osceola</i>	R	.	.	.	25
<i>Page</i>	R	*	.	.	115
<i>Palo Alto</i>	R	.	28	.	99
<i>Plymouth</i>	R	.	54	*	48
<i>Pocahontas</i>	R	*	.	.	*
<i>Polk</i>	U	6520	321	489	2005
<i>Pottawattamie</i>	U	751	34	34	76

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<i>Poweshiek</i>	R	8	91	*	47
<i>Ringgold</i>	R	.	.	.	*
<i>Sac</i>	R	.	.	.	*
<i>Scott</i>	U	1719	34	450	167
<i>Shelby</i>	R	.	33	*	50
<i>Sioux</i>	R	.	221	8	281
<i>Story</i>	U	860	.	251	14
<i>Tama</i>	R	.	.	*	.
<i>Taylor</i>	R	.	.	.	.
<i>Union</i>	R	.	89	28	57
<i>Van Buren</i>	R	.	*	.	60
<i>Wapello</i>	R	396	.	.	109
<i>Warren</i>	U	.	.	*	.
<i>Washington</i>	U	71	.	*	102
<i>Wayne</i>	R	.	68	53	23
<i>Webster</i>	R	528	.	.	*
<i>Winnebago</i>	R	*	.	.	*
<i>Winneshiek</i>	R	.	154	27	33
<i>Woodbury</i>	U	813	377	14	524
<i>Worth</i>	R	.	.	.	*
<i>Wright</i>	R	.	32	.	218
<i>Totals</i>		22,377	3,847	2,516	8,325

*In this table, values of 3 or less are suppressed to protect confidentiality.

Differentiation of Levels of Care

	Level I	Level II	Level II Regional	Level II Regional Neonatology	Level III
Definition & Functions		Provides all services as Level I, plus deliveries of 500 or more. Has a Perinatal Care Committee. Manages high-risk pregnancies, neonates 34 wks and greater, mildly ill newborns, and recovering neonates transferred from referral centers. Infants on oxygen for more than 6 hrs and/or ventilator care for more than 2 hrs require consult with pediatrician or neonatologist at a higher level of care. Transfer should be considered.	Provides all services of Level II, plus manages patients at higher risk. The complexity of care is determined by the training and experience of the physicians and nursing staff and extent of support services. Has a defined referral area & defined relationship with a Level III center. Accepts maternal transports, provides care for infants requiring ventilatory support, maintains a neonatal transport team, and provides for follow-up care of high-risk newborns.	Provides all services as Level II Reg., plus manages high risk neonates less than 34 wks. Extension of Level II Reg with additional professional staff & more extensive physical facilities.	Provides all services as Level II Reg., plus manages high-risk pregnancies and neonates less than 34 wks. Extension of Level II Reg with additional professional staff & more extensive physical facilities.
Physical Facilities		Special area designated for care of sick neonates.	Neonatal intensive care unit with as few as 4 beds.	More equipment, serve more complicated patient population.	More equipment, serve more complicated patient population.
Medical Personnel	Supervised or directed by OB/GYN, pediatrician or physician with special interest & experience.	Perinatal unit under co-direction/supervision of OB/GYN and pediatrician.	Pediatrician serves as director of NICU. Minimum of 3 pediatricians and 3 obstetricians on staff.	Director of NICU is full time pediatrician with certification in neonatal/perinatal medicine, pediatric cardiologist on staff. Neonatologist is in house when unstable critically ill infants on ventilator.	Director of maternal/fetal ICU is full time obstetrician with certification in maternal-fetal medicine; director of NICU is full time pediatrician with certification in neonatal/perinatal medicine; pediatric surgeon on staff, and pediatric cardiologist on staff. Neonatologist in house when unstable critically ill infants on ventilator.
Nursing Personnel	Registered nurses with demonstrated ob and/or neonatal competencies.	Registered nurses with training in care of sick neonates.	Registered nurses have special in high-risk obstetrics and/or neonatal care.	Registered nurses have special training in high-risk neonatal care.	Nurse manager has prior experience in maternal or pediatric nursing with minimum of BSN.
Outreach		Same as Level I.	Provide education to each hospital in referral area at least once per year.	Same as Level II Reg.	Same as Level II Reg.
Allied Health		Same as Level I, plus respiratory therapy, ultrasound & physical therapy services.	Same as Level II, plus RT, certified lab tech and x-ray tech in house 24 hrs/day when infant on ventilator. Personnel have special training and interest in high-risk mothers and infants.	Same as Level II Reg, plus RT, certified lab tech/blood gas tech, x-ray tech and ultrasound tech with neonatal experience on 24/hr basis. Social workers available to neonatal units.	Same as Level II Reg, plus RT, certified lab tech/blood gas tech, x-ray tech and ultrasound tech with neonatal/perinatal experience on 24/hr basis. Social workers assigned to maternal and neonatal units.
Infection Control		Same as Level I.	Same as Level I.	Same as Level I.	Same as Level I.
Safety		Same as Level I.	Same as Level I.	Same as Level I.	Same as Level I.