



SNAPSHOT OF APT QUALITY DATA 2015 - 2017

What's happening in Arizona and in our APT facilities?

Dean V Coonrod, MD-MPH

Chair of the APRS/APT QI Committee

August 10, 2018

ACKNOWLEDGEMENTS

- ❖ APT hospitals and staff providing data
- ❖ Members of the APRS/APT QI Committee
 - Dean V Coonrod, MD, MPH (Chair)
 - Linda A Meiner, MSN, RNC-NIC, NE-BC (Recording Secretary)
 - Rhonda Anderson, RN, DNSc, FAAN, FACHE
 - Alan D Bedrick, MD
 - Martin Celaya, MPH
 - Mary Ellen Cunningham, MPA, RN
 - C Kevin Huls, MD
 - Shelly Lanagan, MS, WHNP, RNC-OB, C-EFM
 - Hugh S Miller, MD
 - Carol Olson, MBA, BSN, RN
 - Enid Quintana-Torres, MPH
 - Sara Salek, MD and/or Eric Tack, MD

OBJECTIVES

- ❑ Summarize available data that illuminates the health status of Arizona's perinatal patients
- ❑ Compare available annual data from APT certified facilities
- ❑ Identify perinatal system opportunities for improvement
- ❑ Identify outcomes of targeted perinatal certification efforts

DATA SOURCES

- ❑ Unless noted on a particular slide – data taken from APT Annual Data submitted by our APT facilities
- ❑ Committee has been asked to consider avoiding duplication of data from APT from birth certificates.
- ❑ Thanks to all at facilities who do the important work of data collection.
 - ❑ Some new information was collected in 2017. No change for 2018.

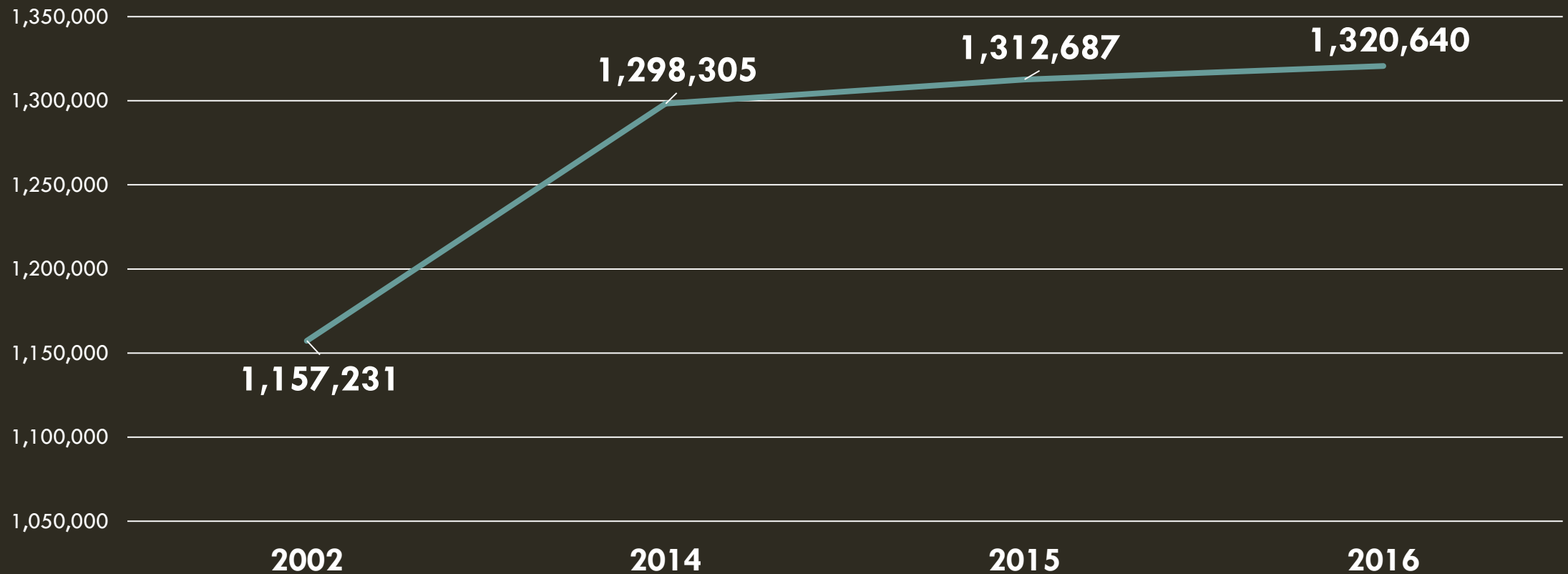
SPEAKER DECLARATION

No conflicts of interest

ARIZONA BIRTH TRENDS

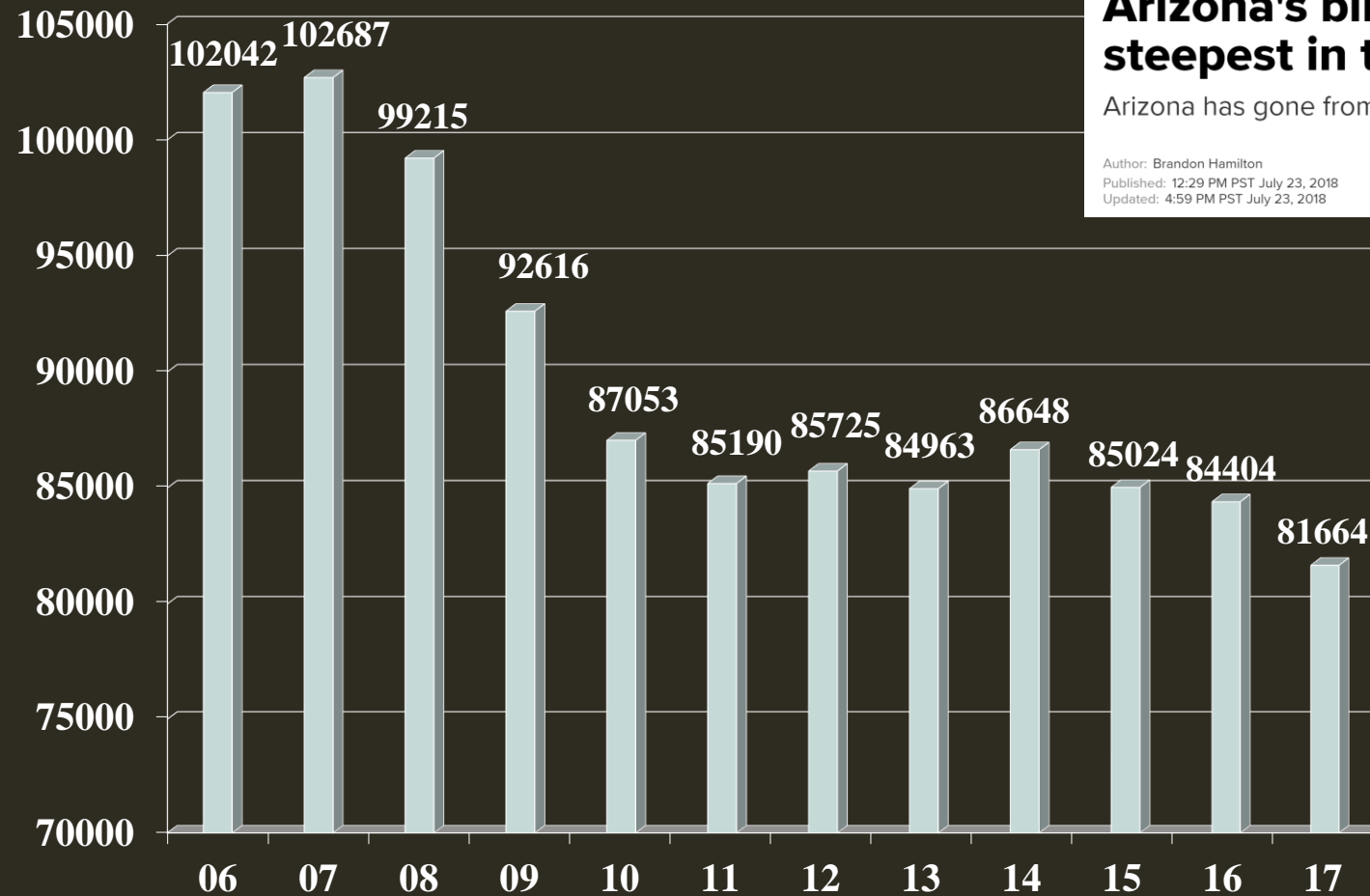


AZ POPULATION — FEMALES 15-44 YEARS



Source: 2016 ADHS Population Health and Vital Statistics

2006-2017 AZ YEARLY BIRTHS



ARIZONA

Arizona's birth rate decline is the steepest in the nation

Arizona has gone from 103,000 births in 2007 to 81,000 last year.

Author: Brandon Hamilton

Published: 12:29 PM PST July 23, 2018

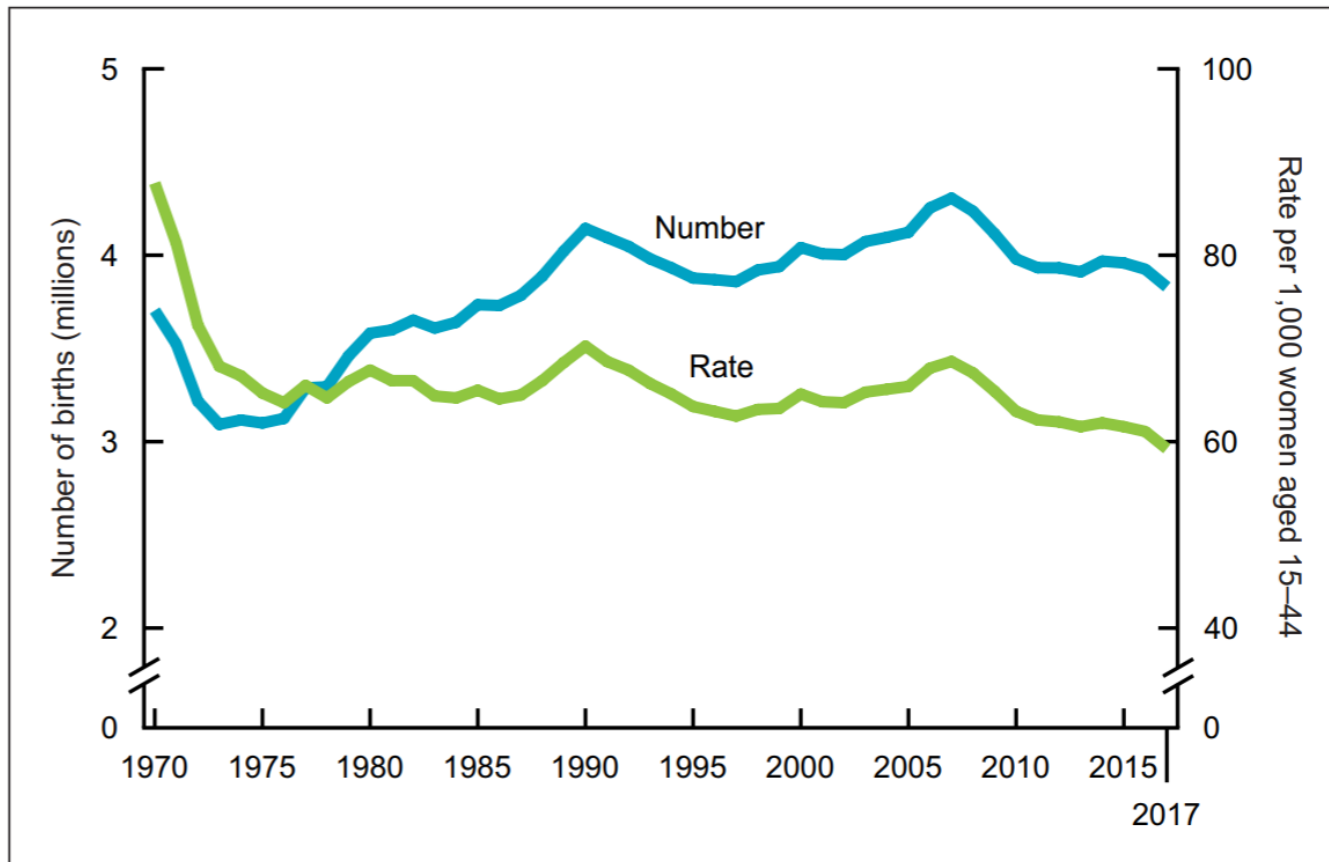
Updated: 4:59 PM PST July 23, 2018

US BIRTH AND FERTILITY RATES

The New York Times

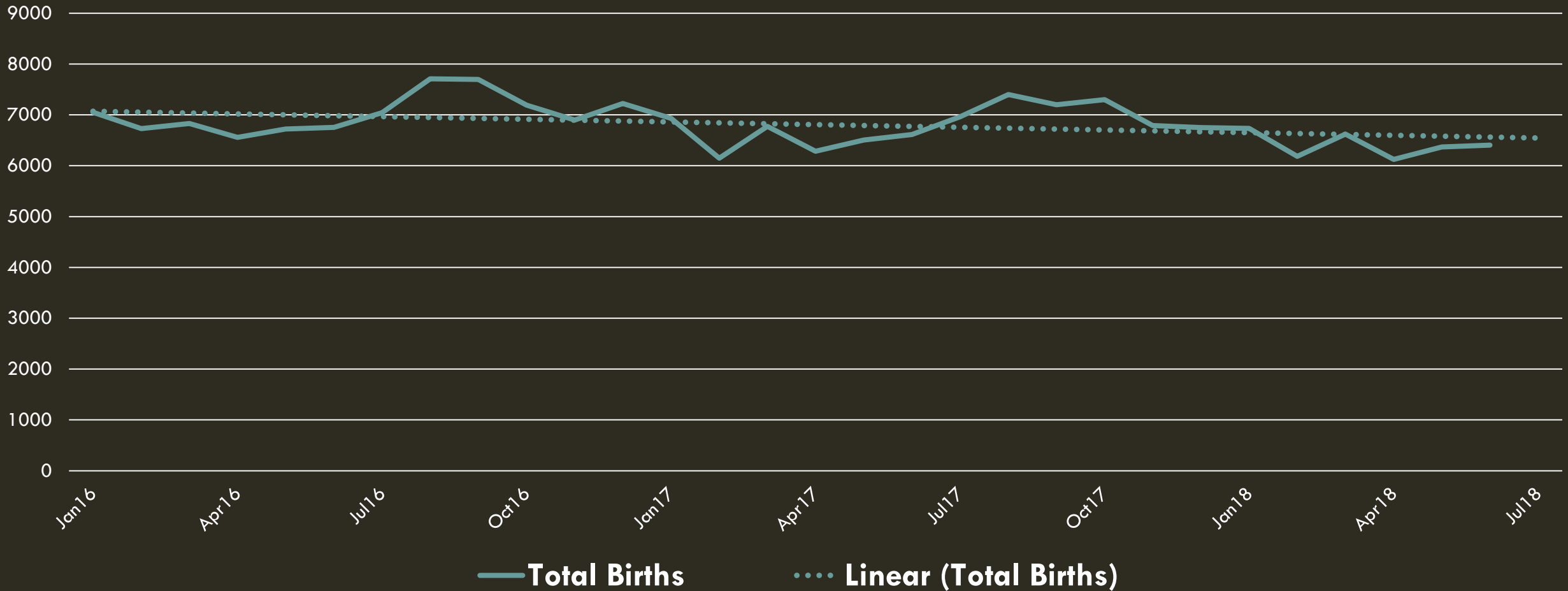
U.S. Fertility Rate Fell to a Record Low, for a Second Straight Year

Figure 1. Live births and general fertility rates: United States, final 1970–2016 and provisional 2017



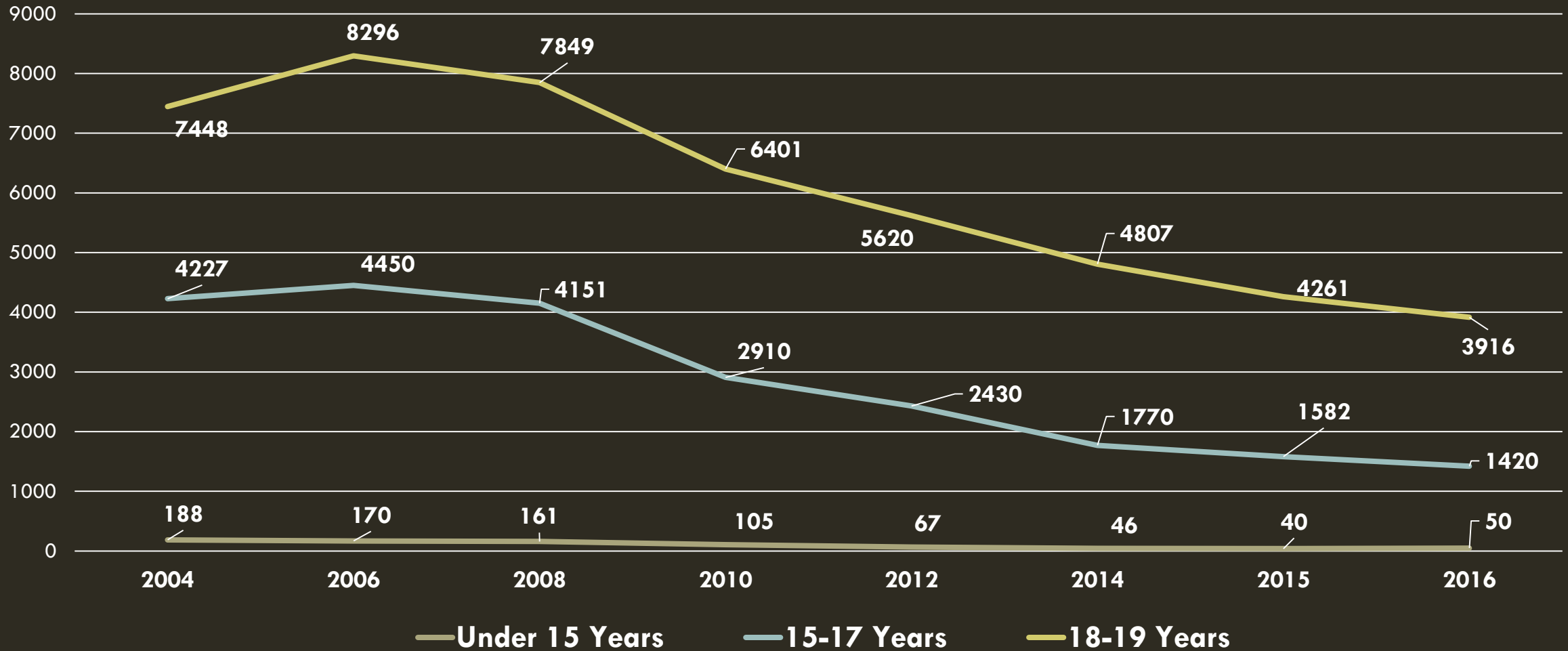
SOURCE: NCHS, National Vital Statistics System, Natality.

2018-2018 AZ MONTHLY BIRTHS



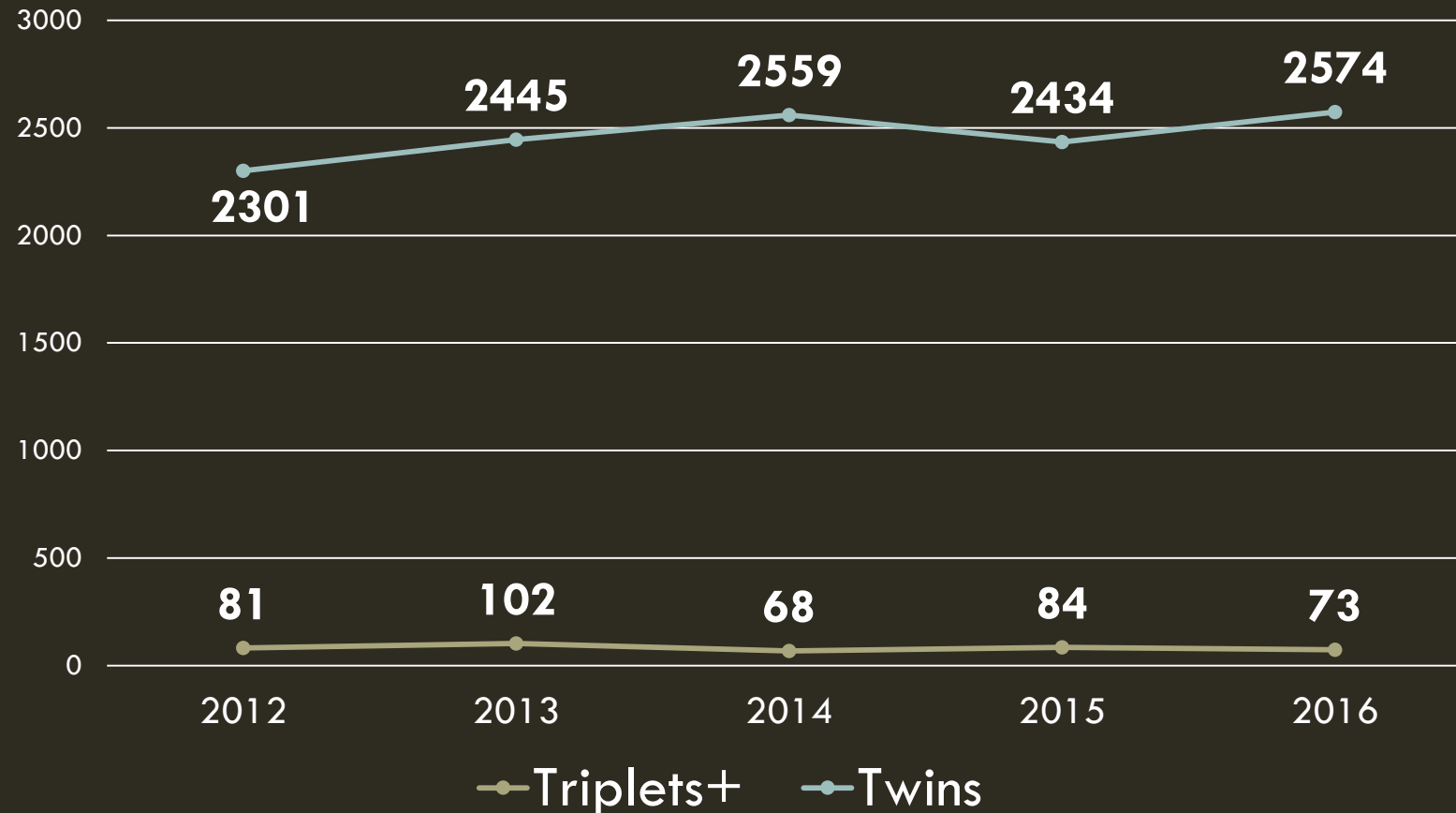
Source: 2017 ADHS Vital Statistics

TEEN BIRTHS IN ARIZONA (NOT PREGNANCIES)



Source: 2016 ADHS Population Health and Vital Statistics

2012-2016 AZ MULTIPLE BIRTHS

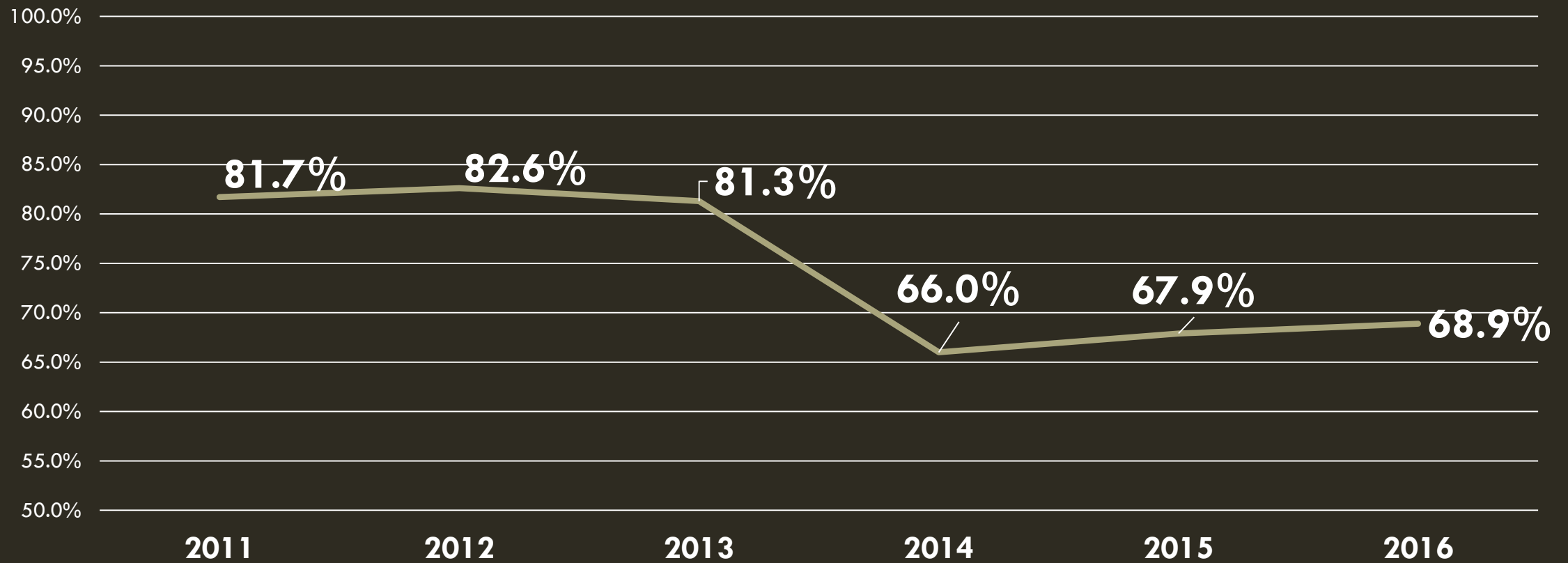


Note:
Past Years Peaks
Twins - 2693 in 2008
Triplets+ - 175 in 2008

AZ PAYEE FOR DELIVERIES

	2000	2010	2013	2016
AHCCCS	42.5%	53.3%	53.9%	52.3%
IHS	1.7%	2.0%	1.3%	1.3%
Private Insurance	50.5%	41.0%	41.2%	40.9%
Self	3.2%	3.0%	3.5%	5.2%
Unknown	2.2%	0.7%	0.2%	0.3%

PRENATAL CARE IN ARIZONA — 1ST TRIMESTER

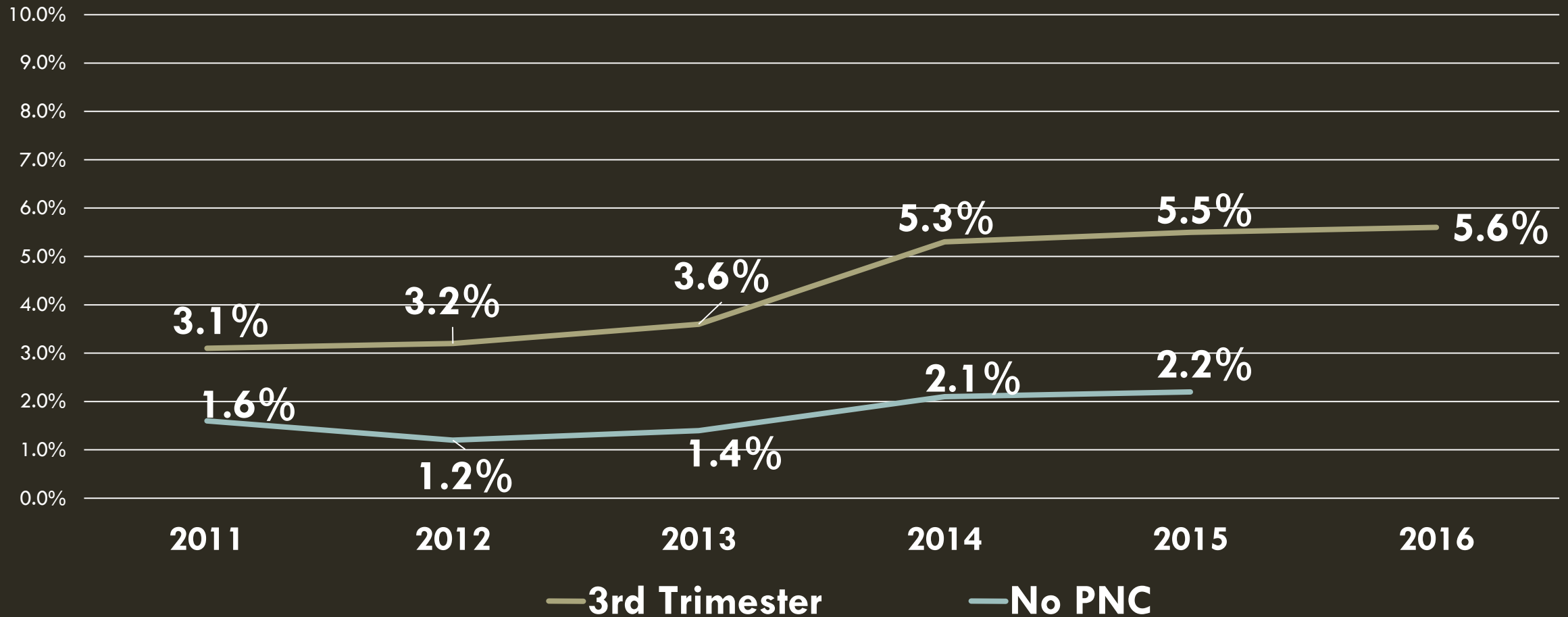


Change in Birth Certificate 2014

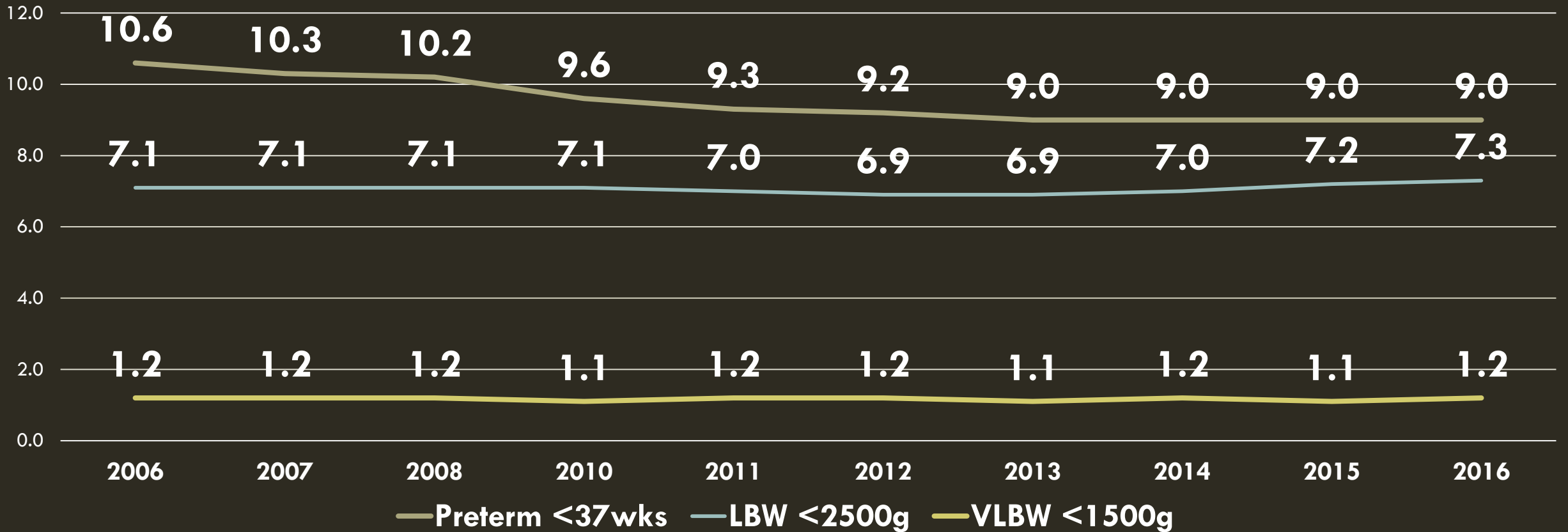
Source: 2016 ADHS Population Health and Vital Statistics

HP2020-MICH-10.1 Target is 77.9%

PRENATAL CARE IN ARIZONA — LATE OR NONE

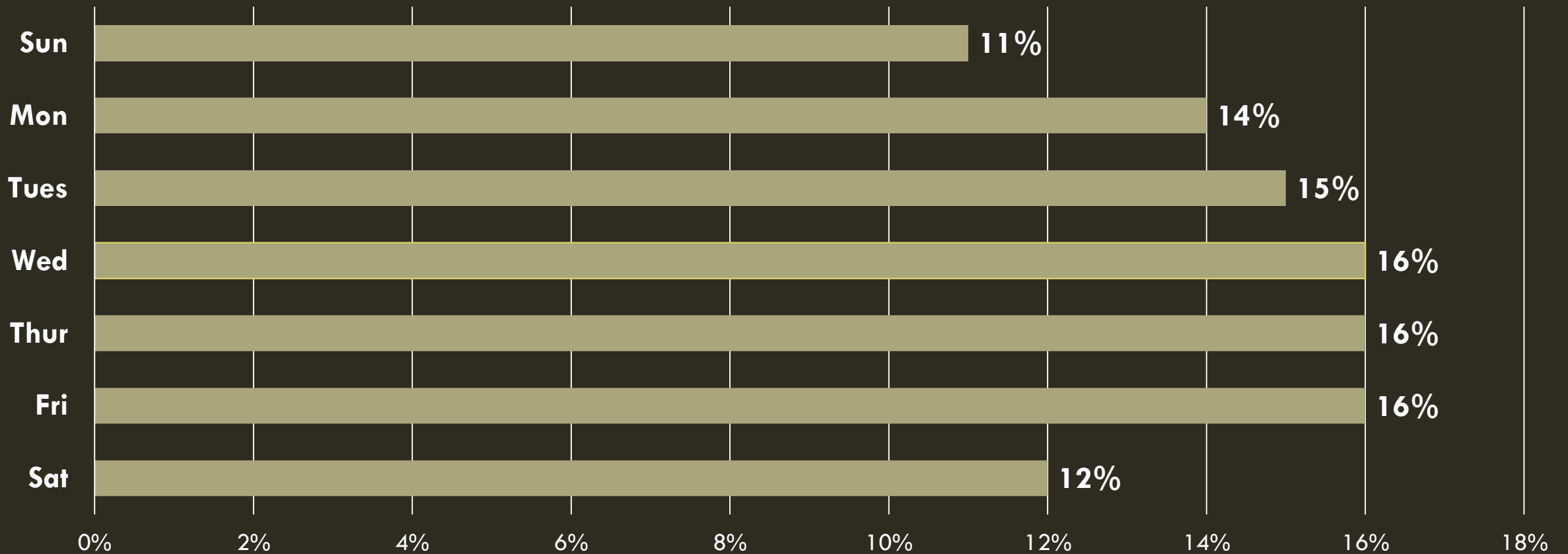


% PRETERM AND LBW BIRTHS 2006-2016



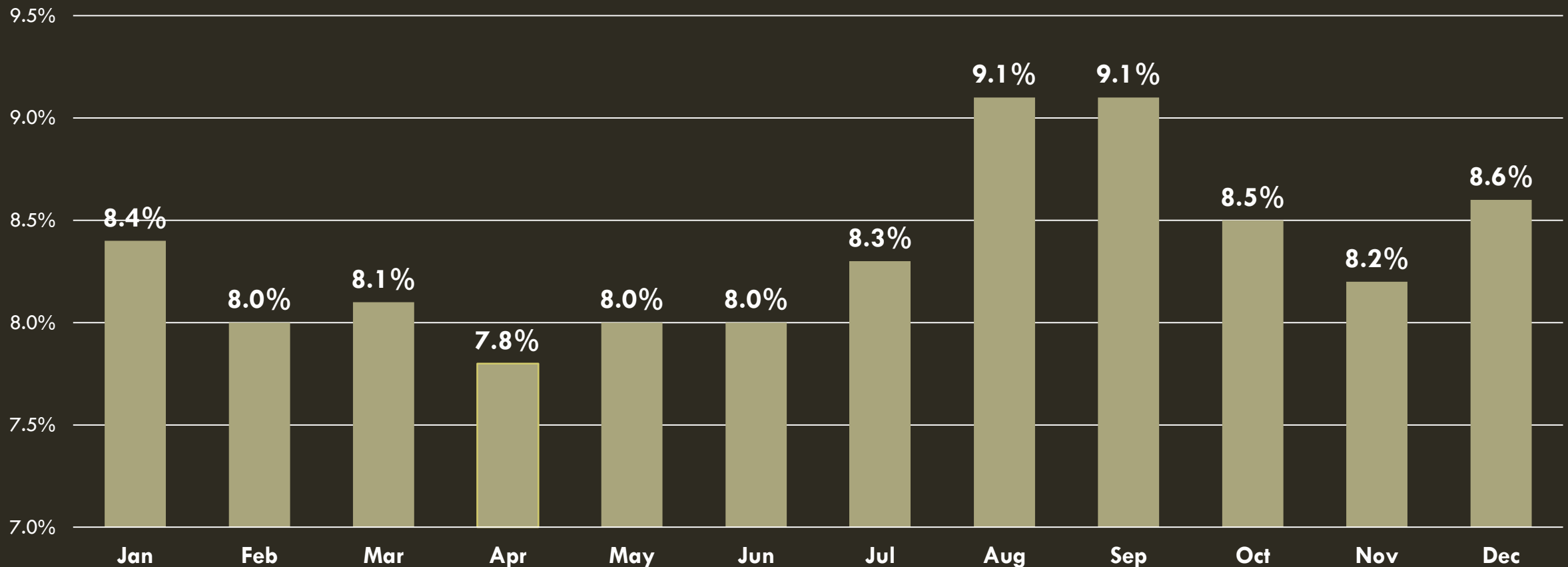
HP2020-MICH-9.1 PTB Target – 11.4%
 HP2020-MICH-8.1 LBW Target – 7.8%
 HP2020-MICH-8.2 VLBW Target – 1.4%

2016 % AZ BIRTHS BY DAY OF THE WEEK



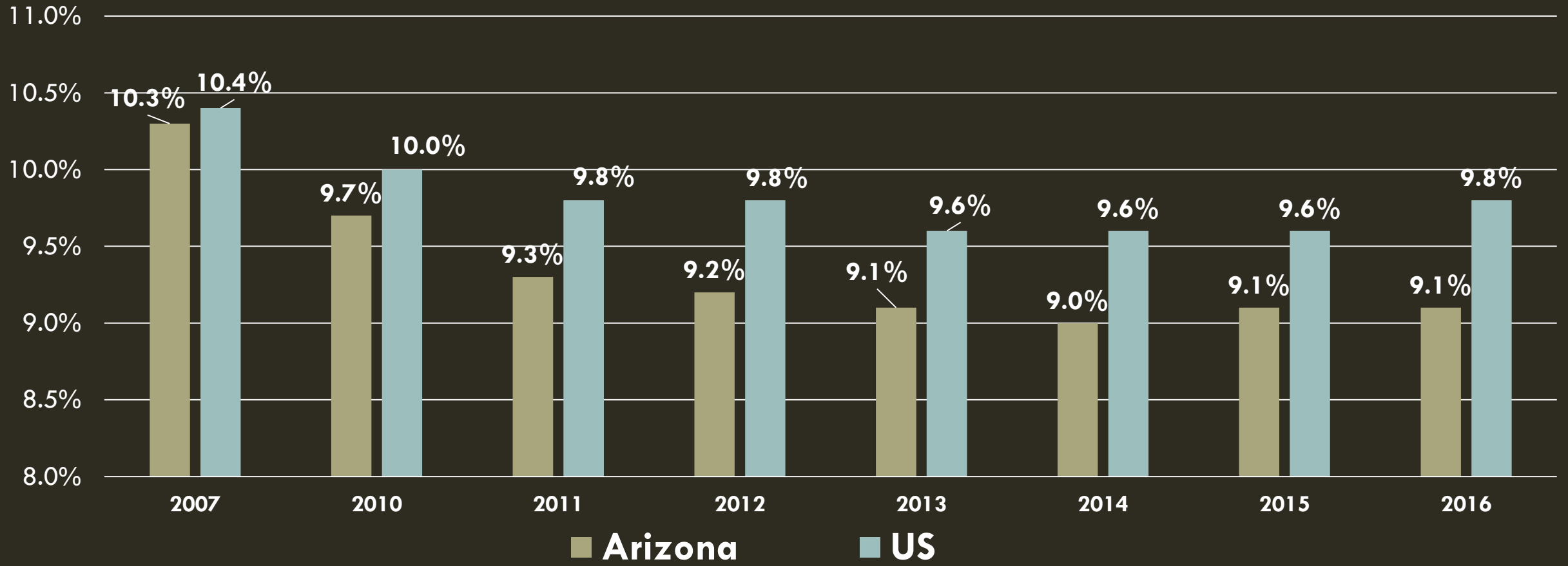
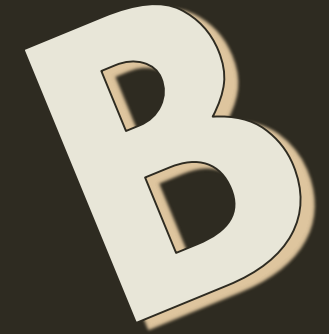
Source: 2016 ADHS Population and Health Vital Statistics

2016 % AZ BIRTHS BY MONTH



Source: 2016 ADHS Population and Health Vital Statistics

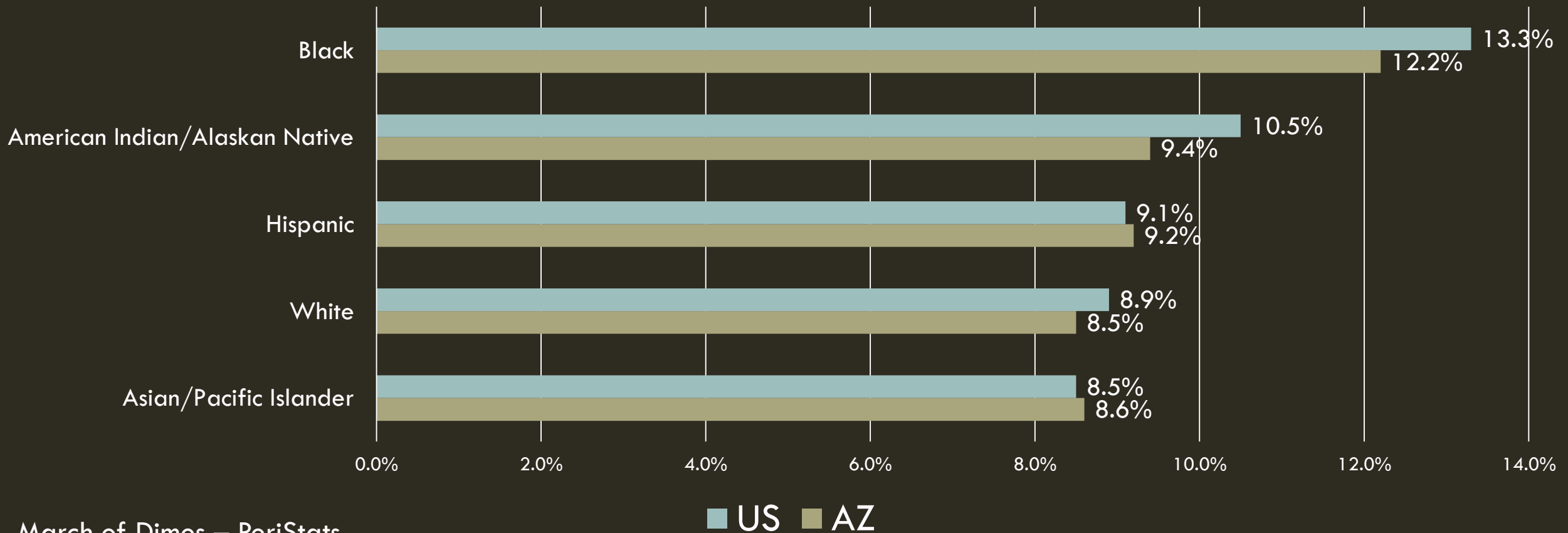
MARCH OF DIMES 2017 PREMATURE BIRTH REPORT CARD FOR ARIZONA



MARCH OF DIMES 2017 PREMATURE BIRTH REPORT CARD FOR ARIZONA

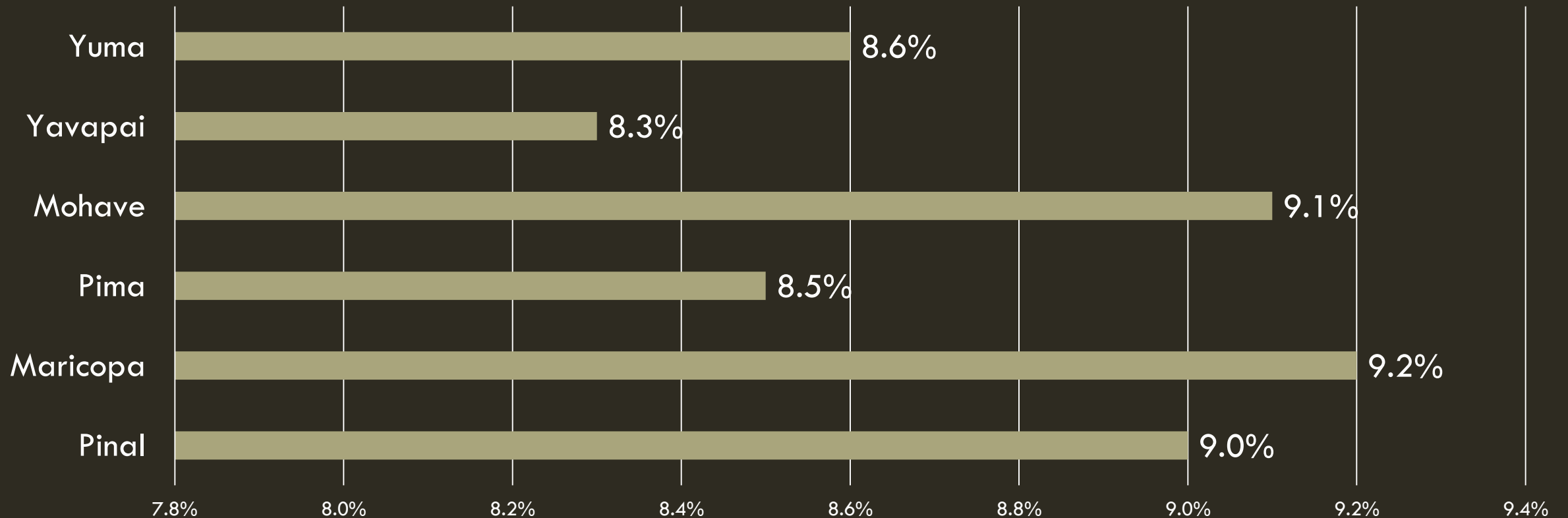
Disparity Ratio
AZ 1.17
US 1.23

2013-2015 Racial Disparity in Premature Live Births

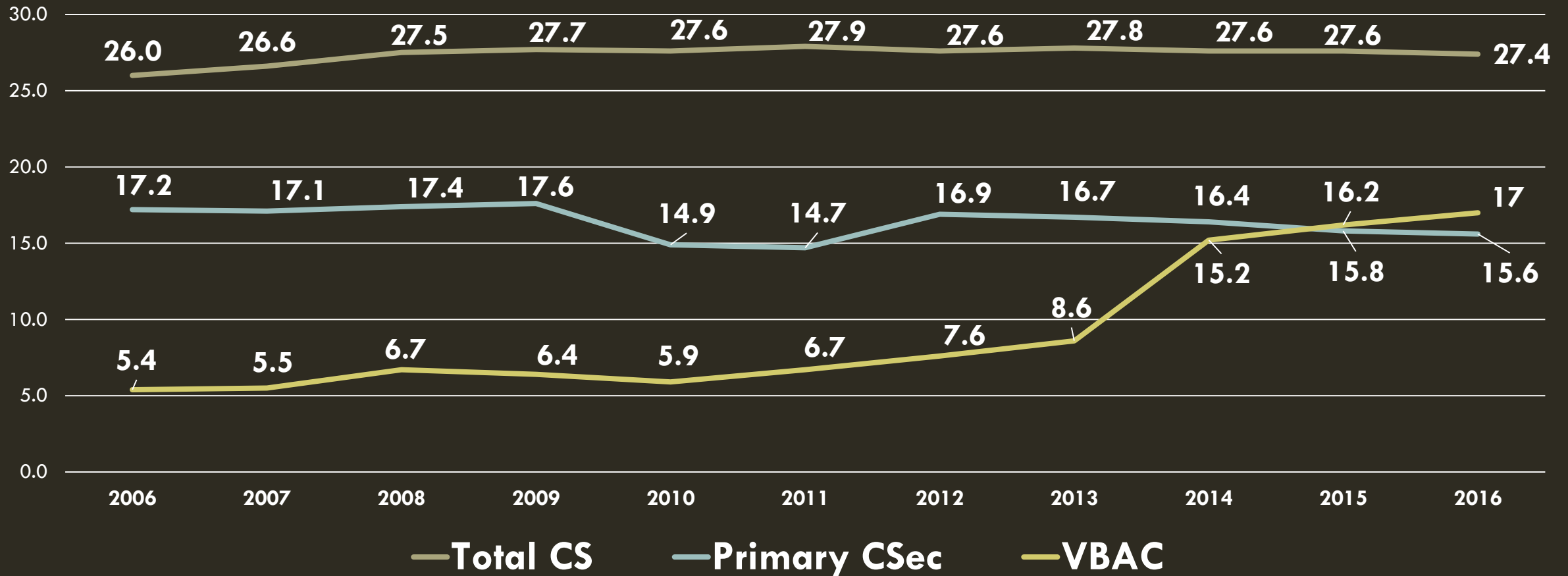


MARCH OF DIMES 2017 PREMATURE BIRTH REPORT CARD FOR ARIZONA

2015 Preterm Birth Rates by County of Residence



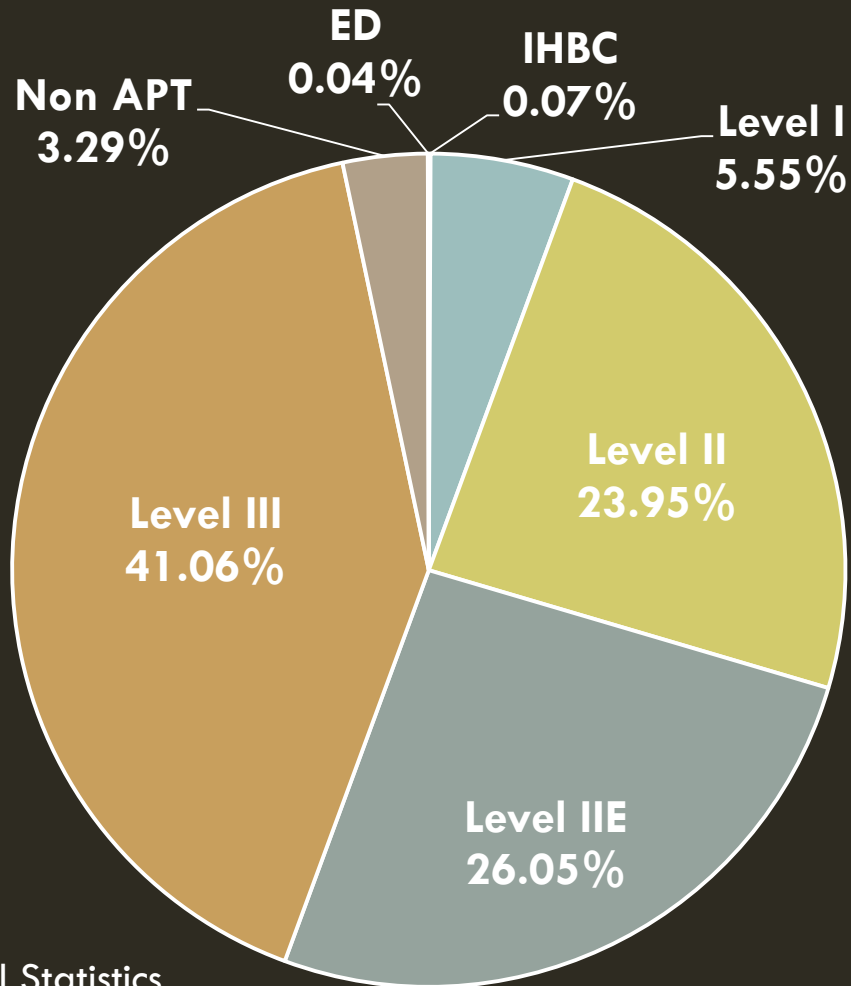
% TOTAL CS, PRIMARY CS AND VBAC BIRTHS 2006-2016



HP2020-MICH-7.1 Prim Csec Target 23.9%
In low risk (FT, singleton, vertex)

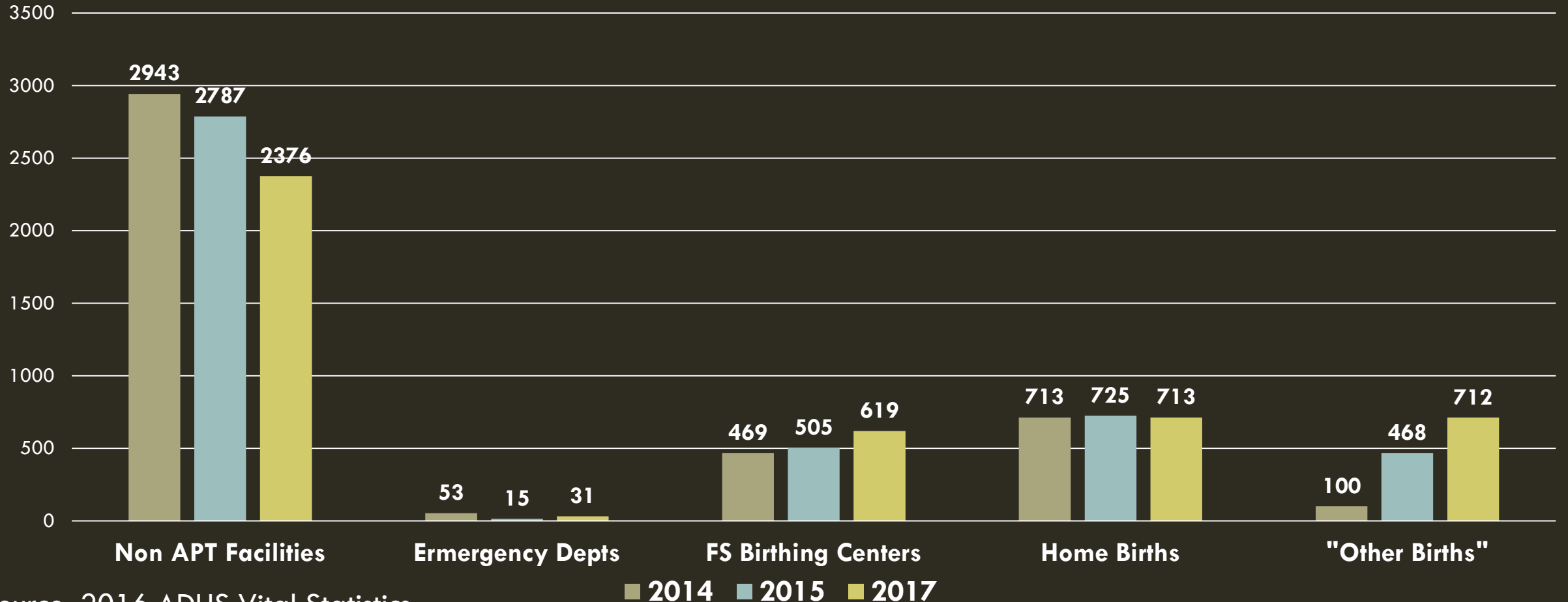
AZ BIRTHS BY SETTING AND CHARACTERISTICS

AZ HOSPITAL BIRTHS BY LEVEL OF CARE - 2017



96.7% of Arizona Hospital Births occur in APT Certified Facilities

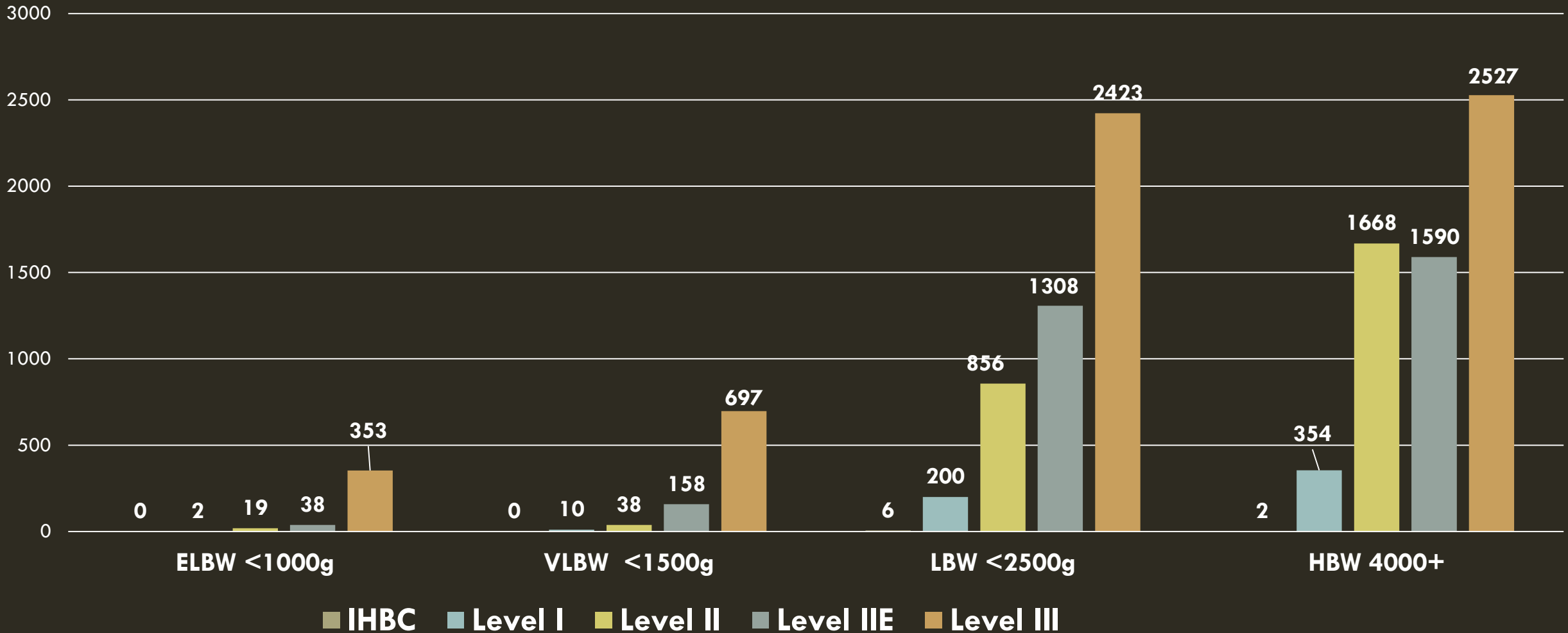
ALTERNATIVE BIRTH LOCATIONS AND TRENDS 2014-2017



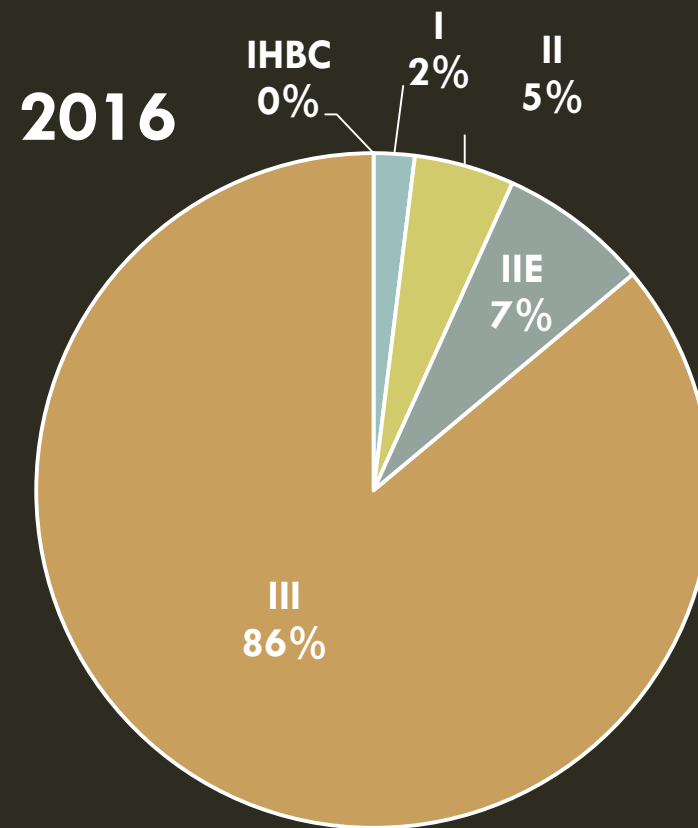
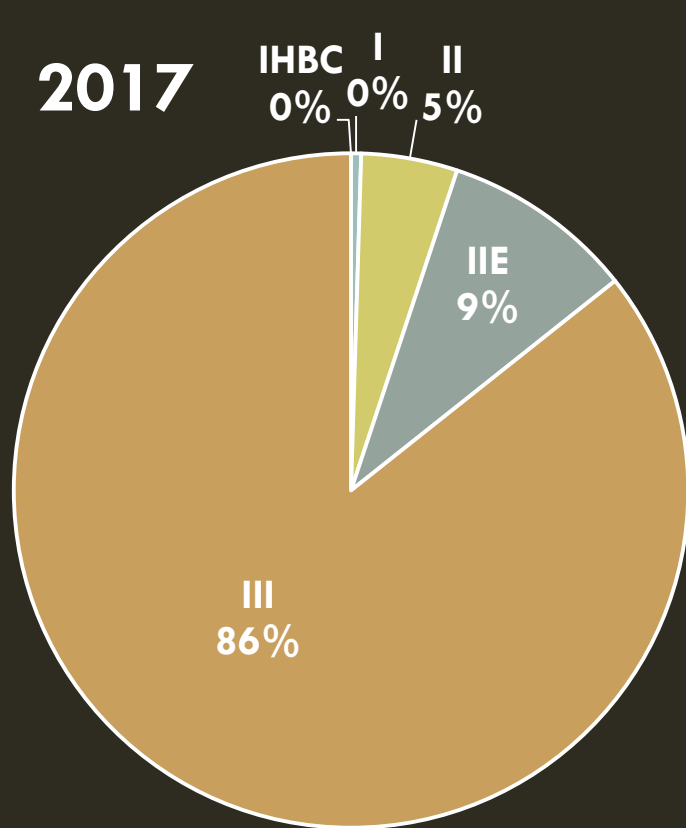
Source: 2016 ADHS Vital Statistics

REGIONALIZATION — RIGHT LEVEL OF CARE

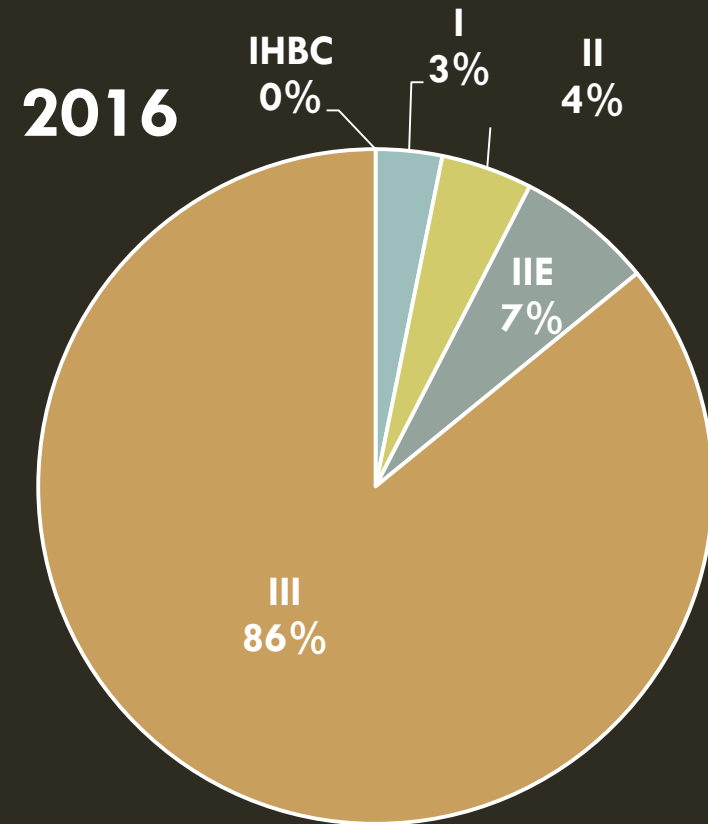
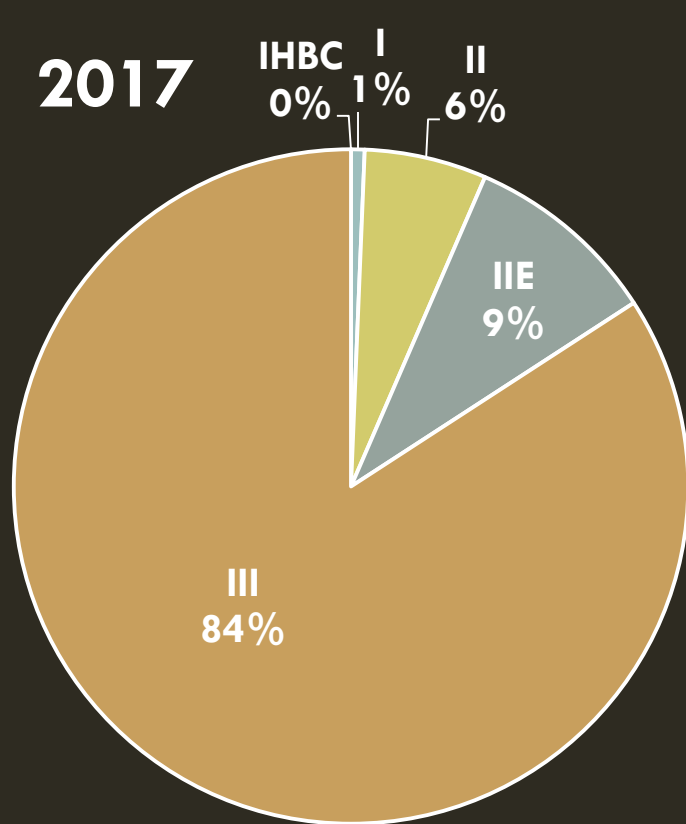
VLBW, LBW AND HBW BIRTHS BY LEVEL - 2017



BIRTH LOCATION - ELBW <1000G (ABOUT <28 WEEKS)

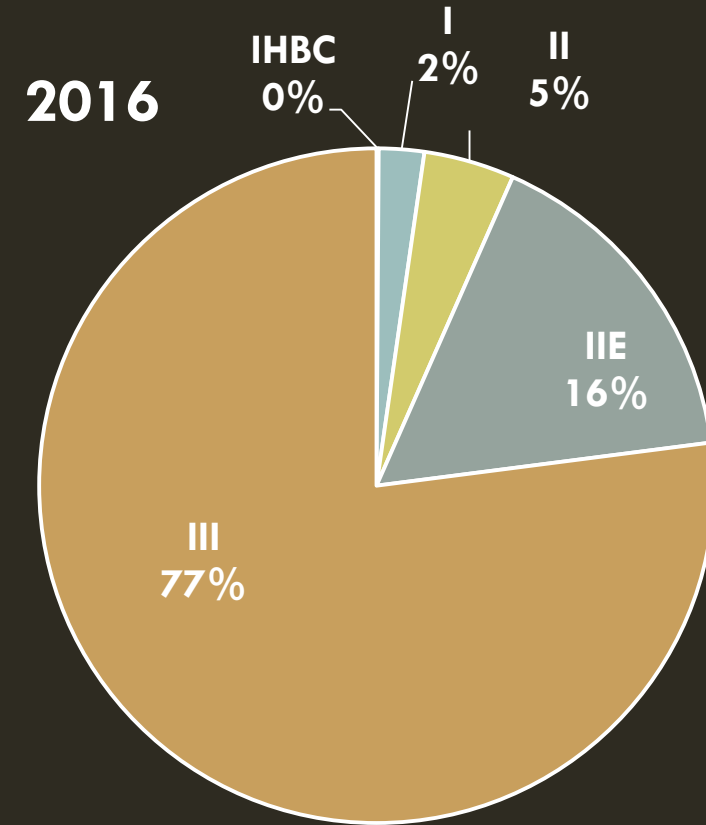
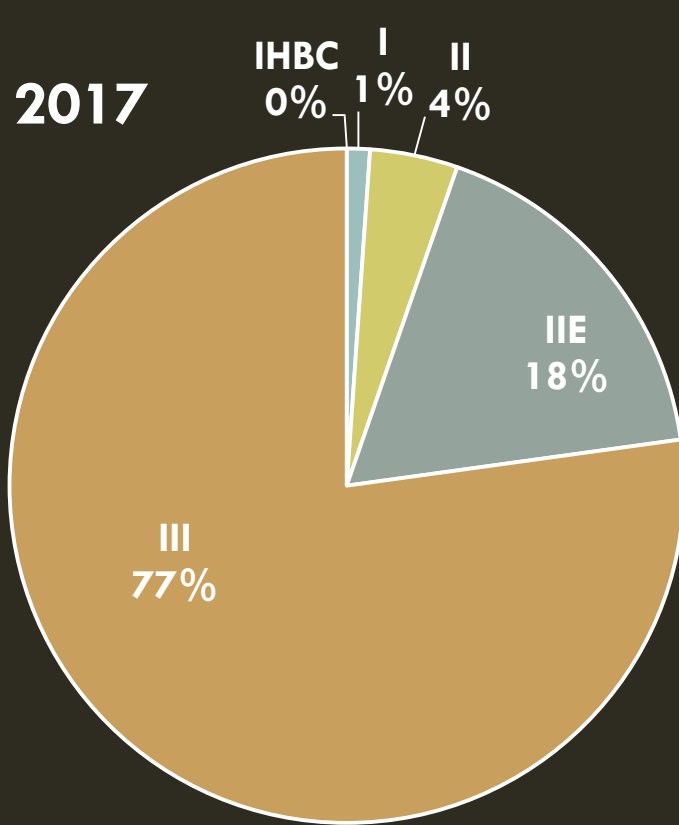


BIRTH LOCATION - EGA < 28 WEEKS

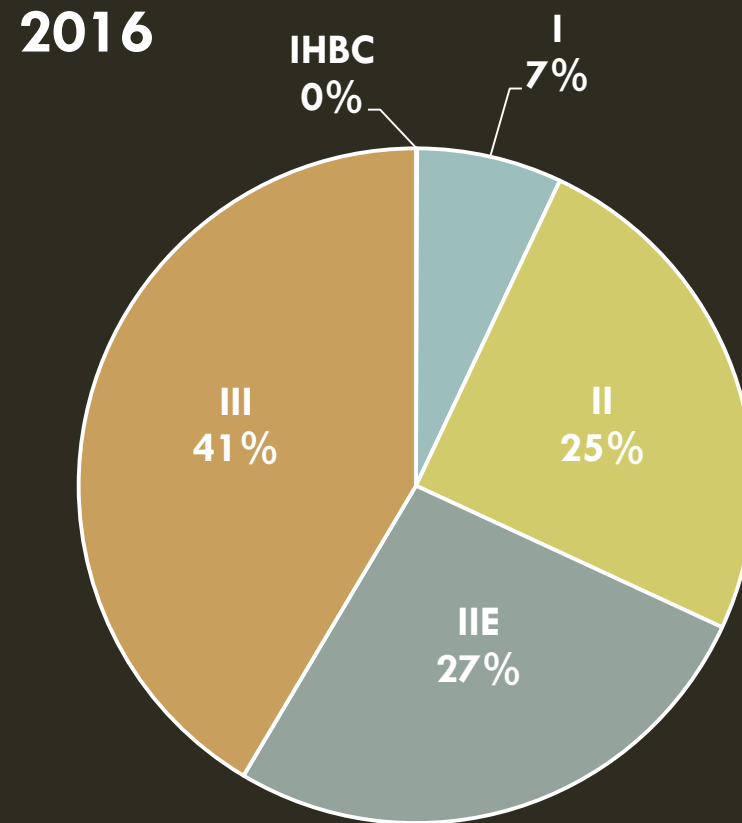
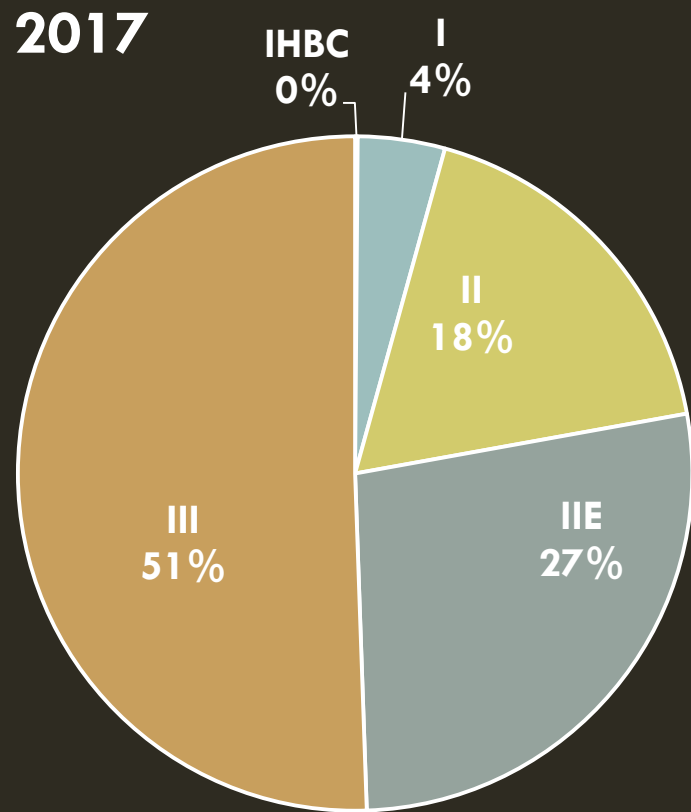


BIRTH LOCATION - VLBW <1500G (ABOUT <30 WEEKS)

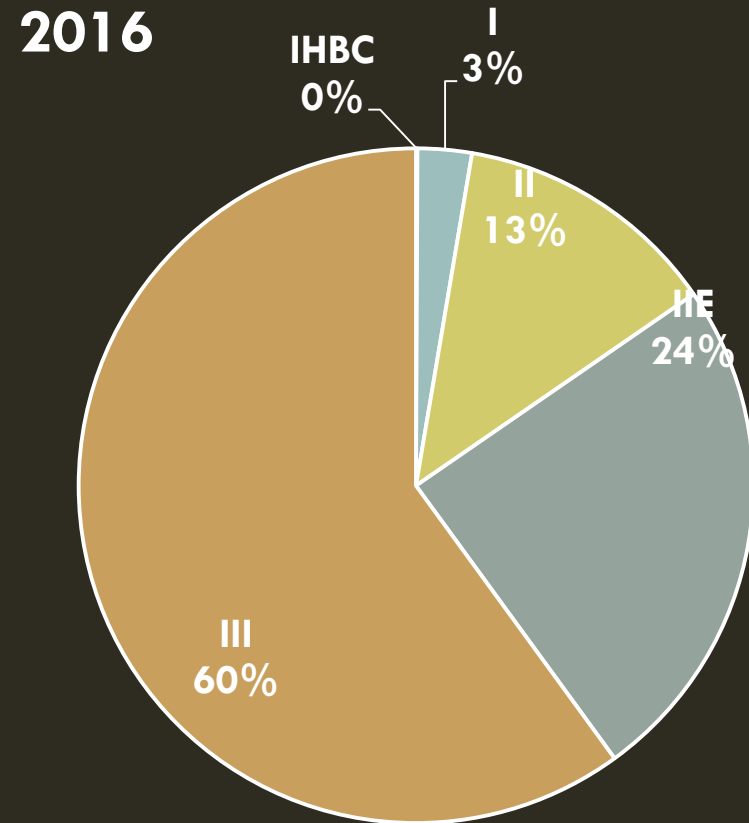
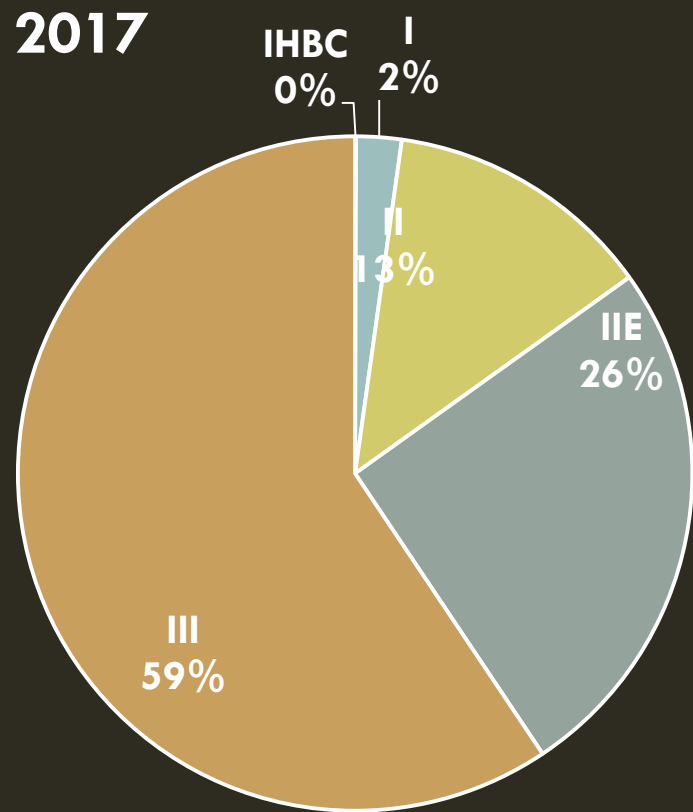
HP2020-MICH-33
Target 83.7%
APT 93%



BIRTH LOCATION - LBW <2500G (ABOUT <36 WEEKS)



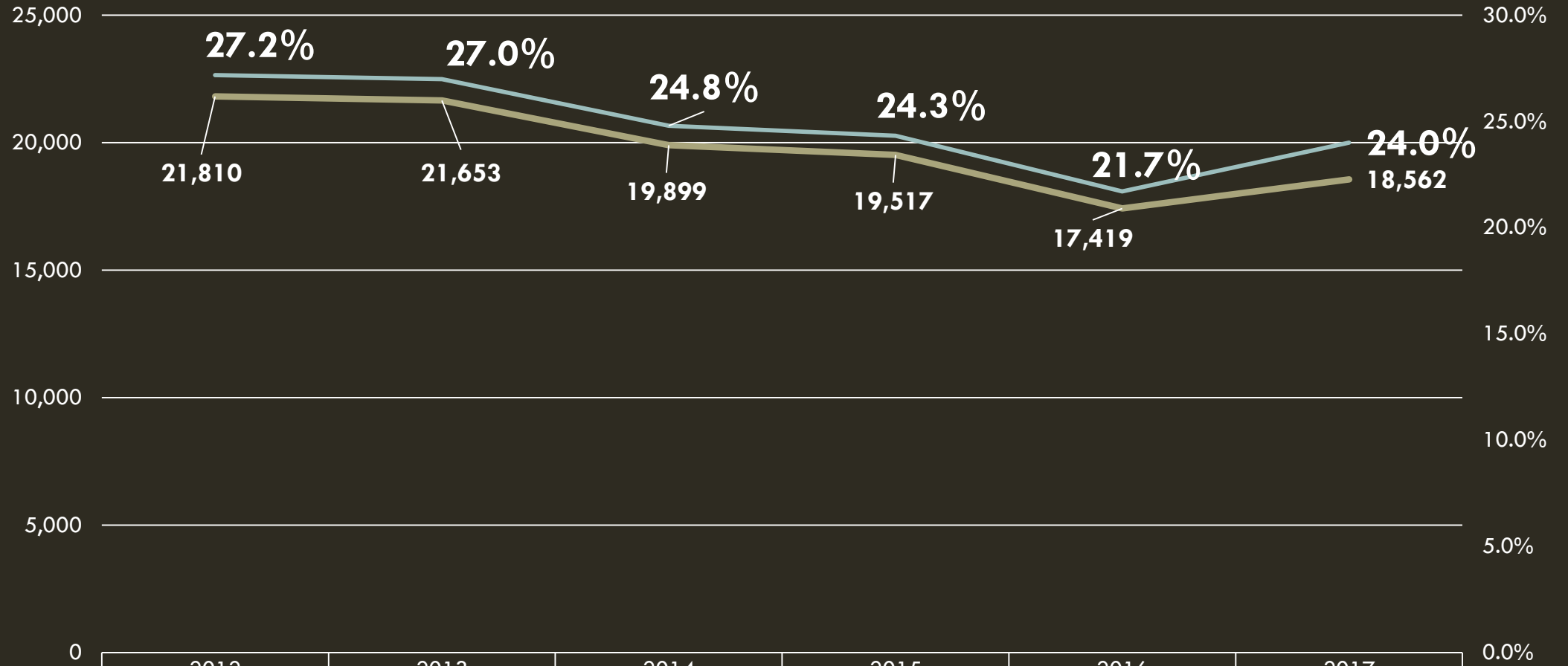
BIRTH LOCATION - EGA < 36 WEEKS



Transports to and from APT Facilities 2017

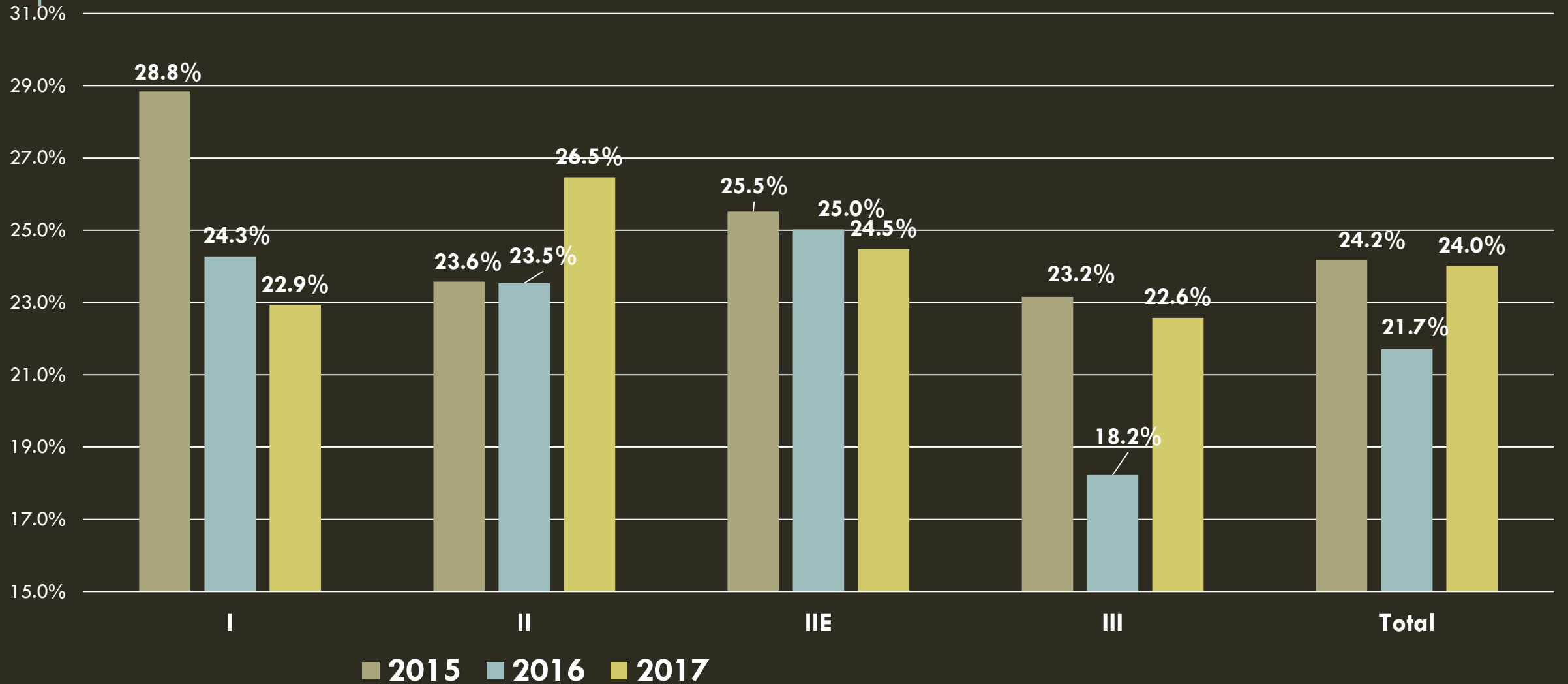
	IHBC	I	II	III E	III	Total
OB Sent	118	201	231	122	7	679
OB Rec'd	3	91	196	158	724	1172
Neo Sent	7	213	215	197	169	802
Neo Rec'd	0	0	1	4	61	66
Neo Back Sent	0	2	18	172	324	516
Neo Back Rec'd	0	0	30	25	24	79

INDUCTIONS 2011-2016

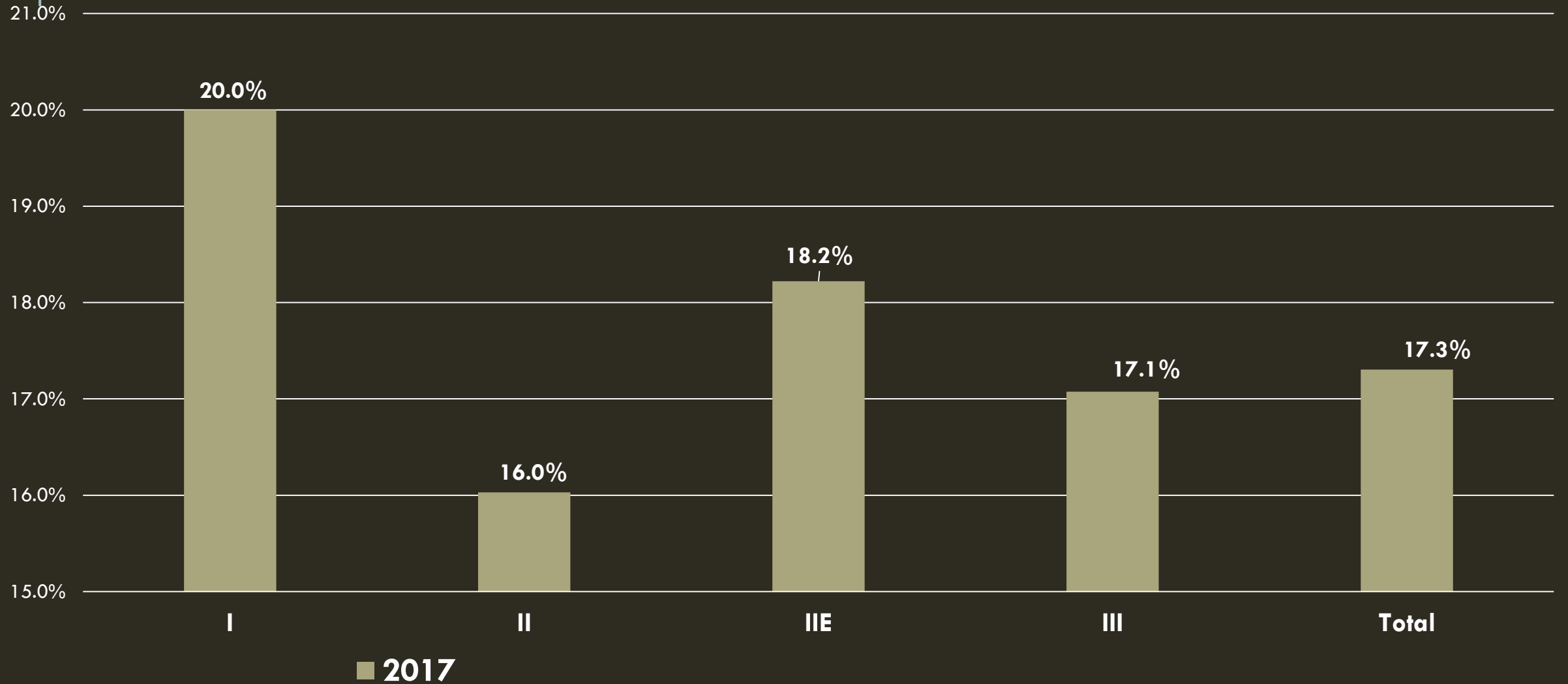


	2012	2013	2014	2015	2016	2017
Number	21,810	21,653	19,899	19,517	17,419	18,562
Rate	27.2%	27.0%	24.8%	24.3%	21.7%	24.0%

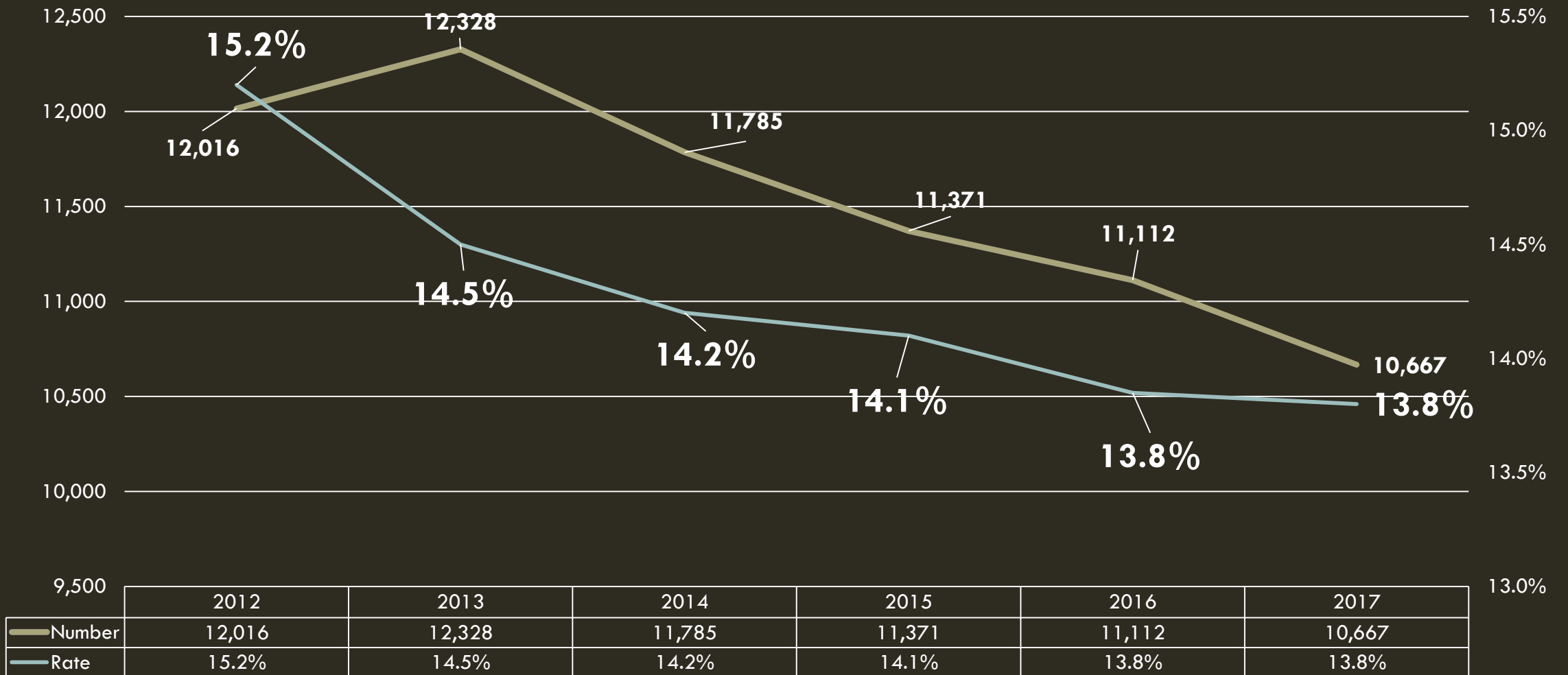
INDUCTION RATES/TOTAL DELIVERIES BY LEVEL OF CARE



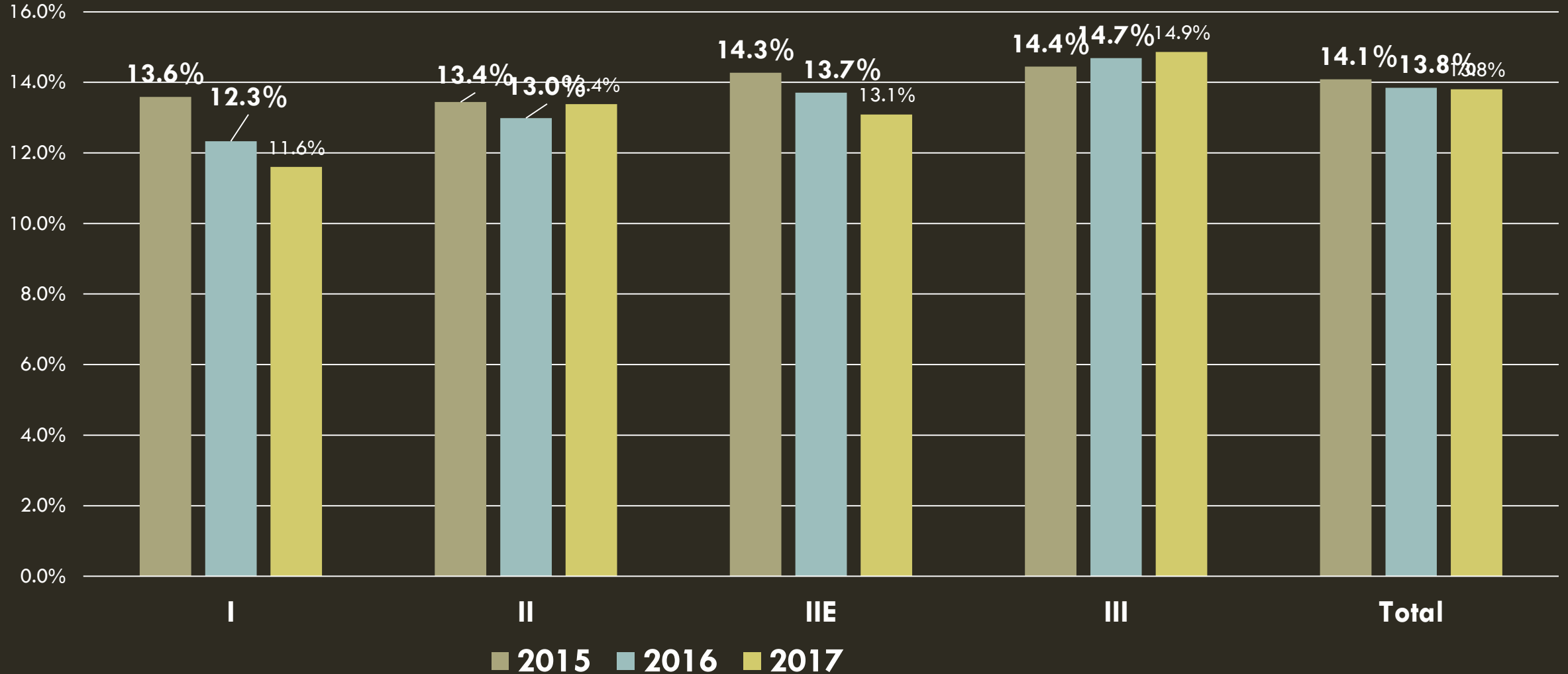
C-SECTION RATES AFTER INDUCTION



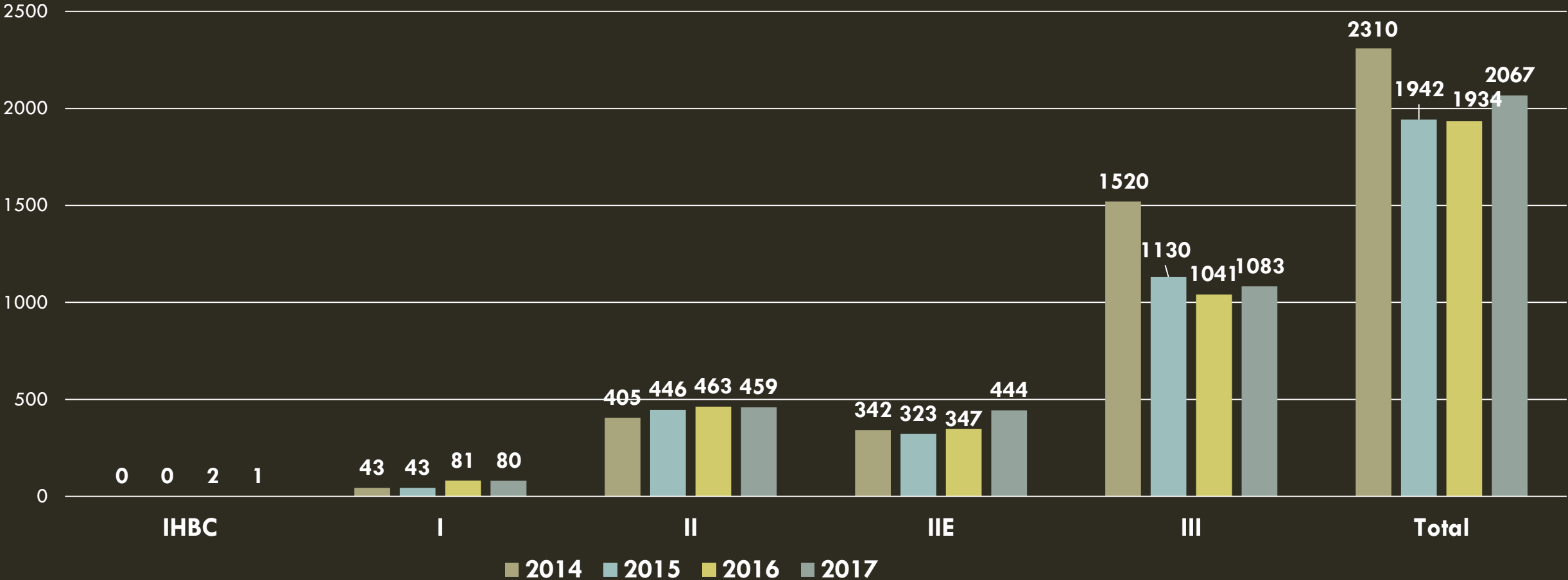
PRIMARY CESAREANS 2012-2017



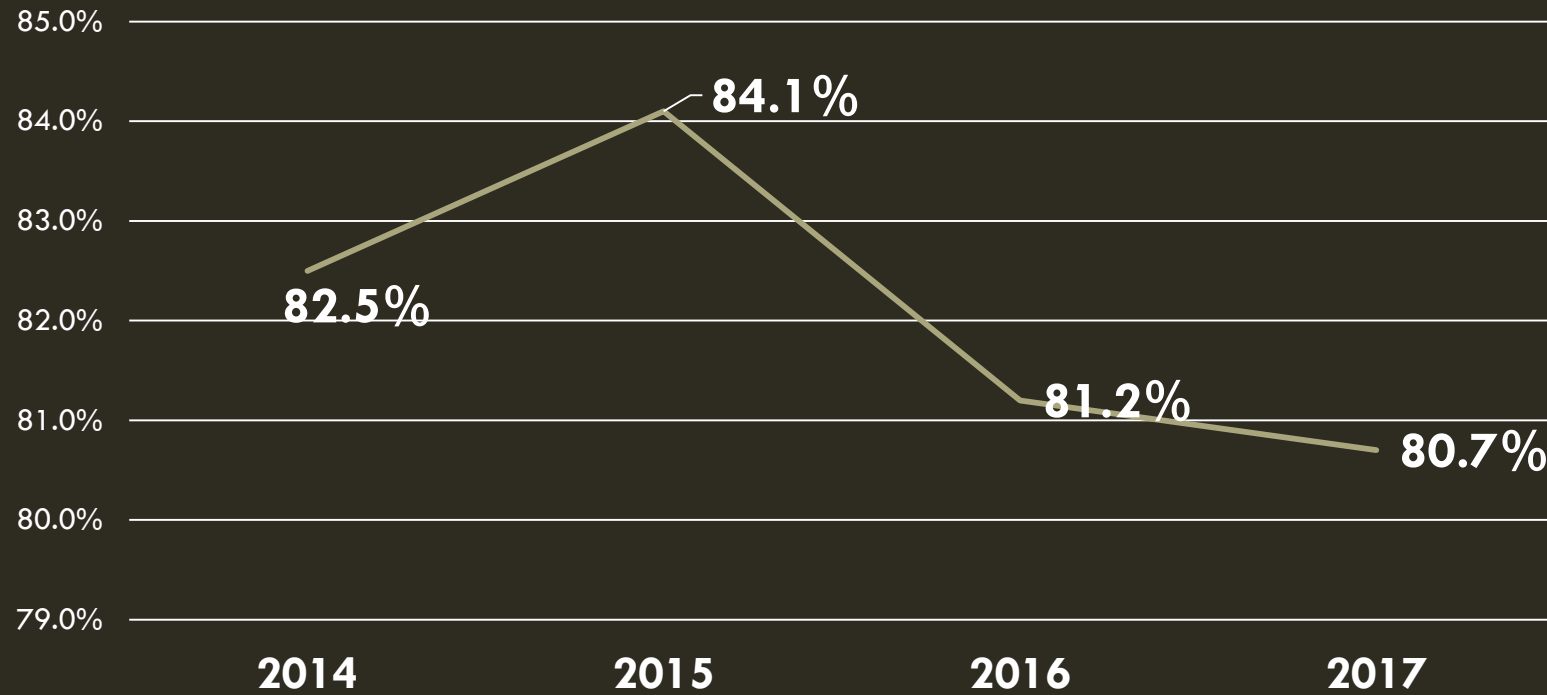
PRIMARY C-SECTIONS RATES/TOTAL DELIVERIES BY LEVEL OF CARE



VBACS IN APT FACILITIES — 2014-2017

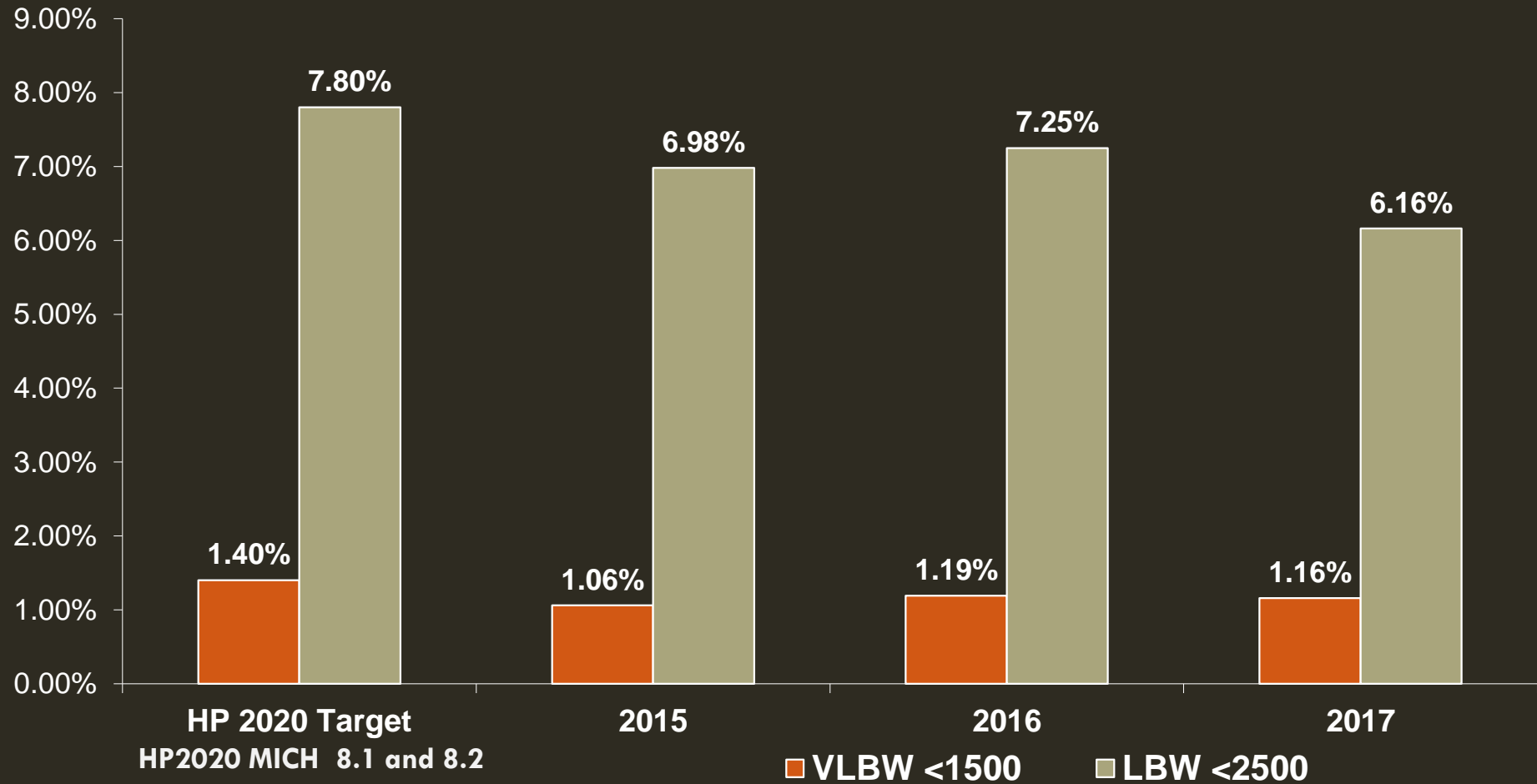


VBAC SUCCESS 2014-2017



RATE OF VLBW AND LBW DELIVERIES

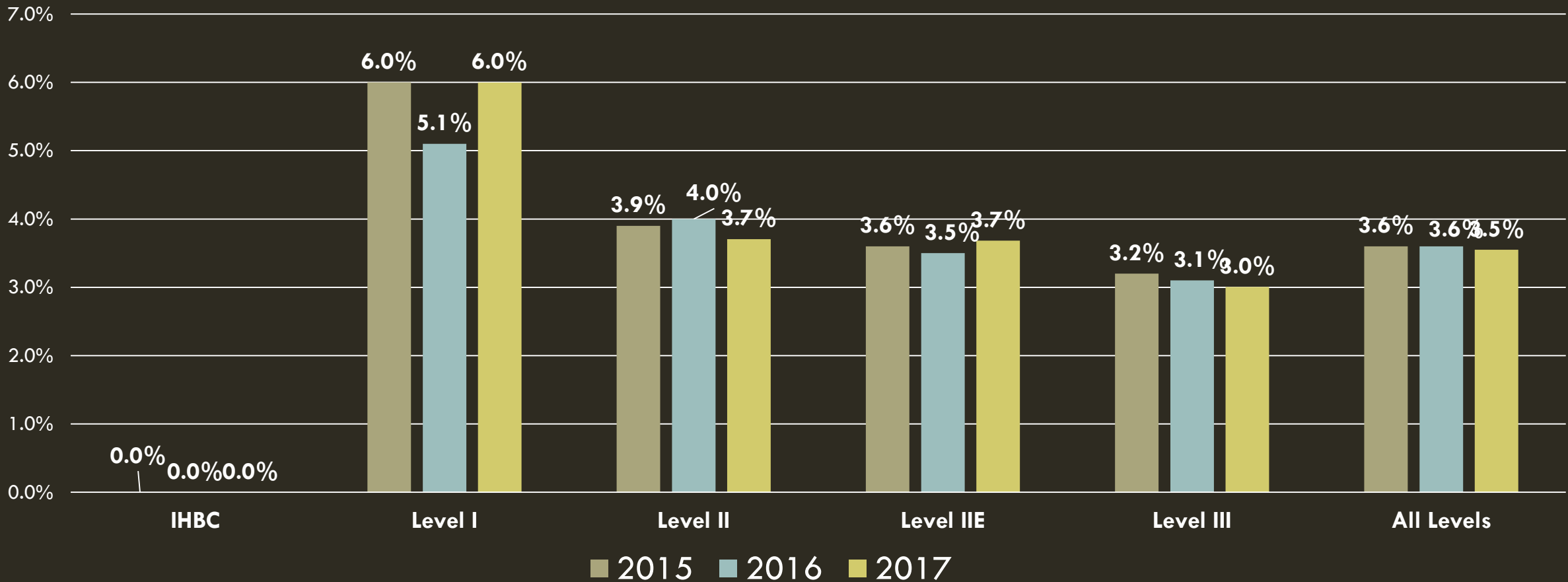
BASED ON DELIVERIES IN APT FACILITIES — 2014-2016



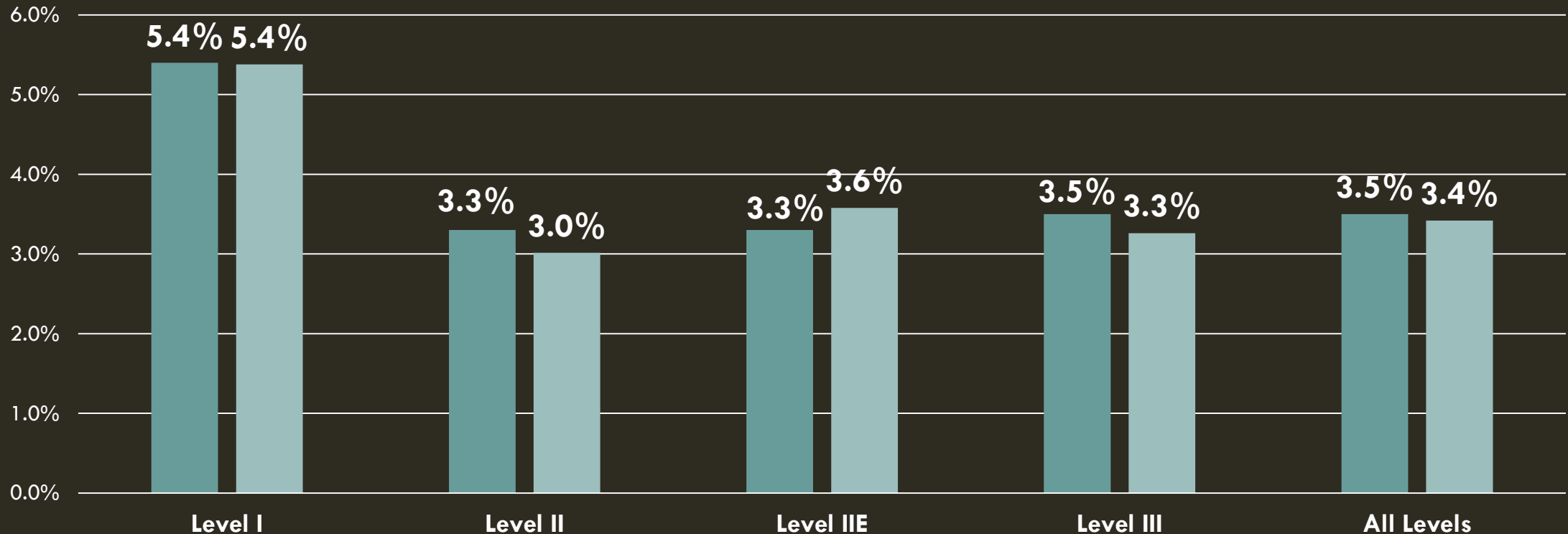
BIRTHS BY GESTATIONAL AGE

EGA	Number	Percent
<24	161	0.2%
24-27	299	0.4%
28-31	598	0.8%
32-35	3,247	4.2%
36-38	24,031	31.0%
39+	49,101	63.4%

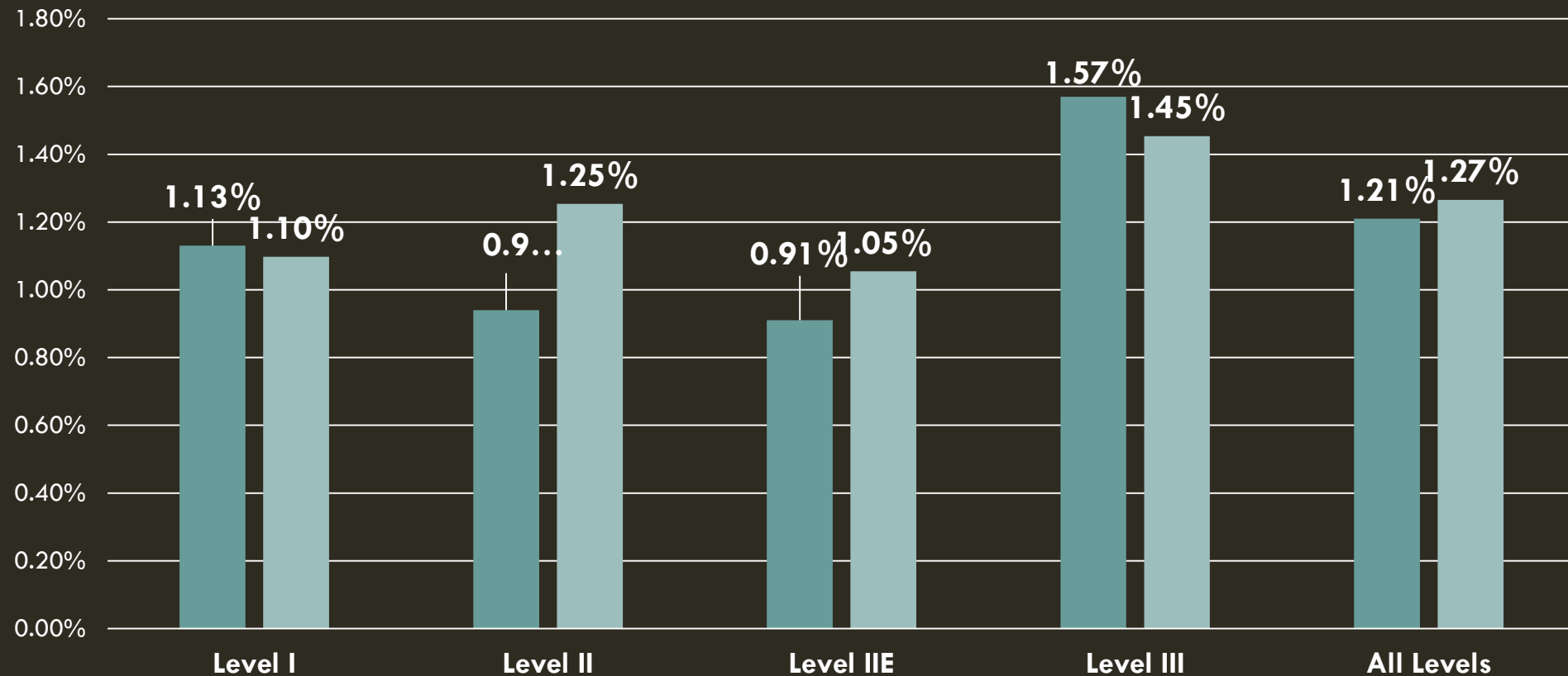
INSTRUMENT DELIVERIES — LEVEL OF CARE



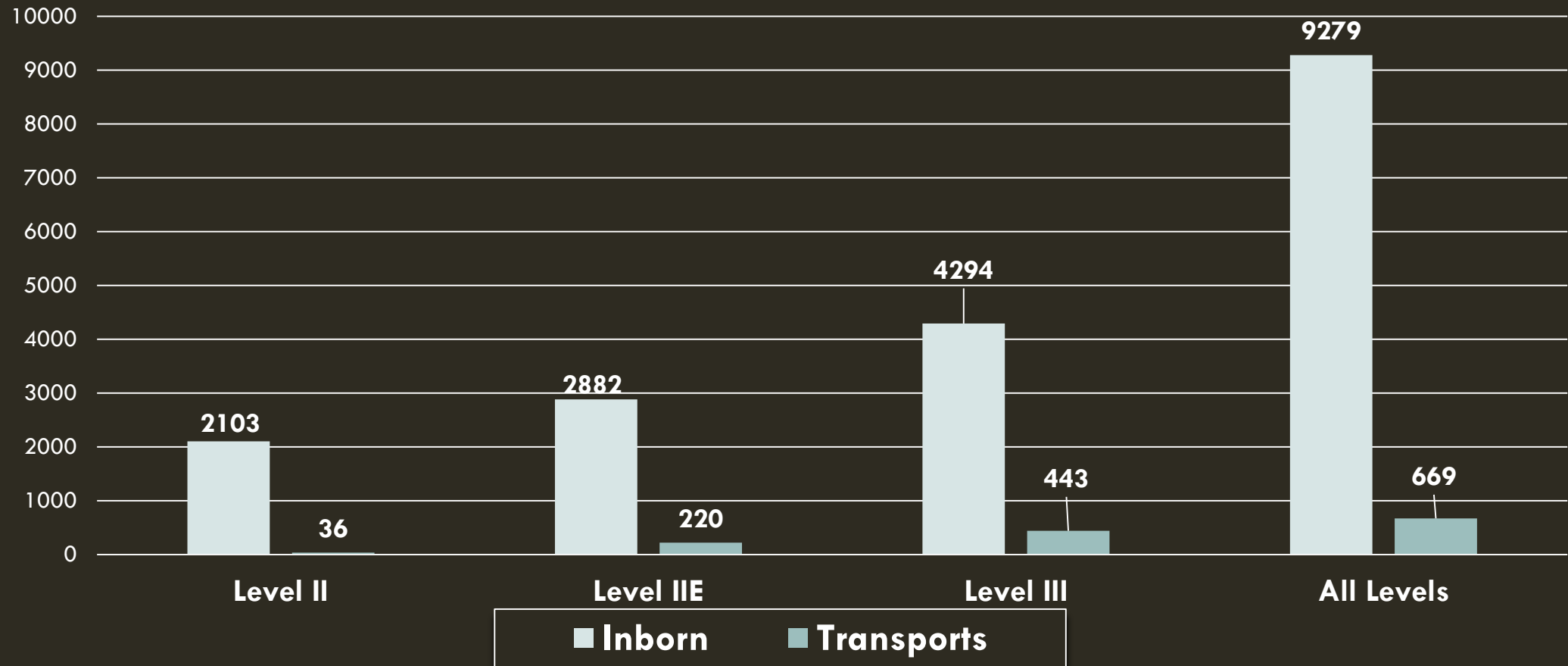
GENERAL ANESTHESIA FOR C-SECTIONS — LEVEL OF CARE 2016 & 2017



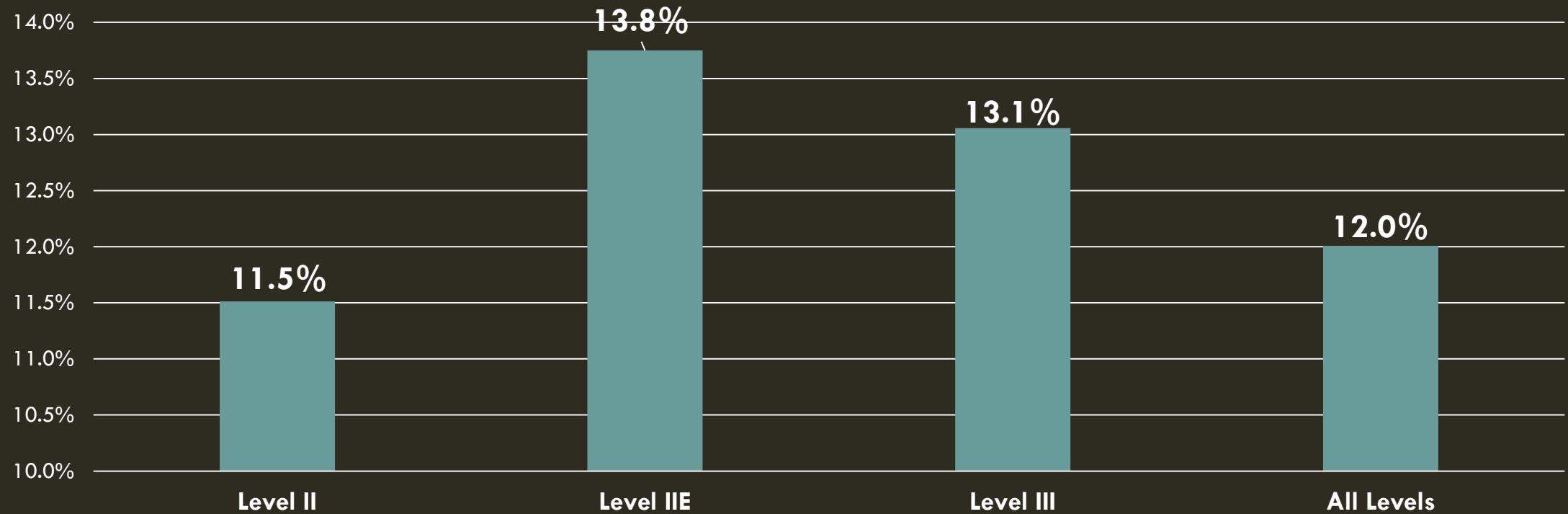
5 MIN APGARS 6 OR LESS — RATE BY LOC — 2016 & 2017



ADMISSION TO CCN OR NICU — TOTALS BY LOC - 2017



INBORN ADMISSION TO CCN OR NICU — RATE BY LOC 2017



SCHEDULED DELIVERIES AT 36, 37 OR 38 WEEKS — NOT MED NECESSARY

2013

- **United States Average – 6% not medically necessary**
- **Arizona Average – 7% not medically necessary**
 - **Involving at least 6061 newborns**
 - **APT Hospitals average 6.2% (Range 0 – 26%) – 38 hospitals reporting**
 - **Non APT Hospitals average 12.6% (Range 0 – 33%) – 5 hospitals reporting**

SCHEDULED DELIVERIES AT 36, 37 OR 38 WEEKS — NOT MED NECESSARY

2015-16

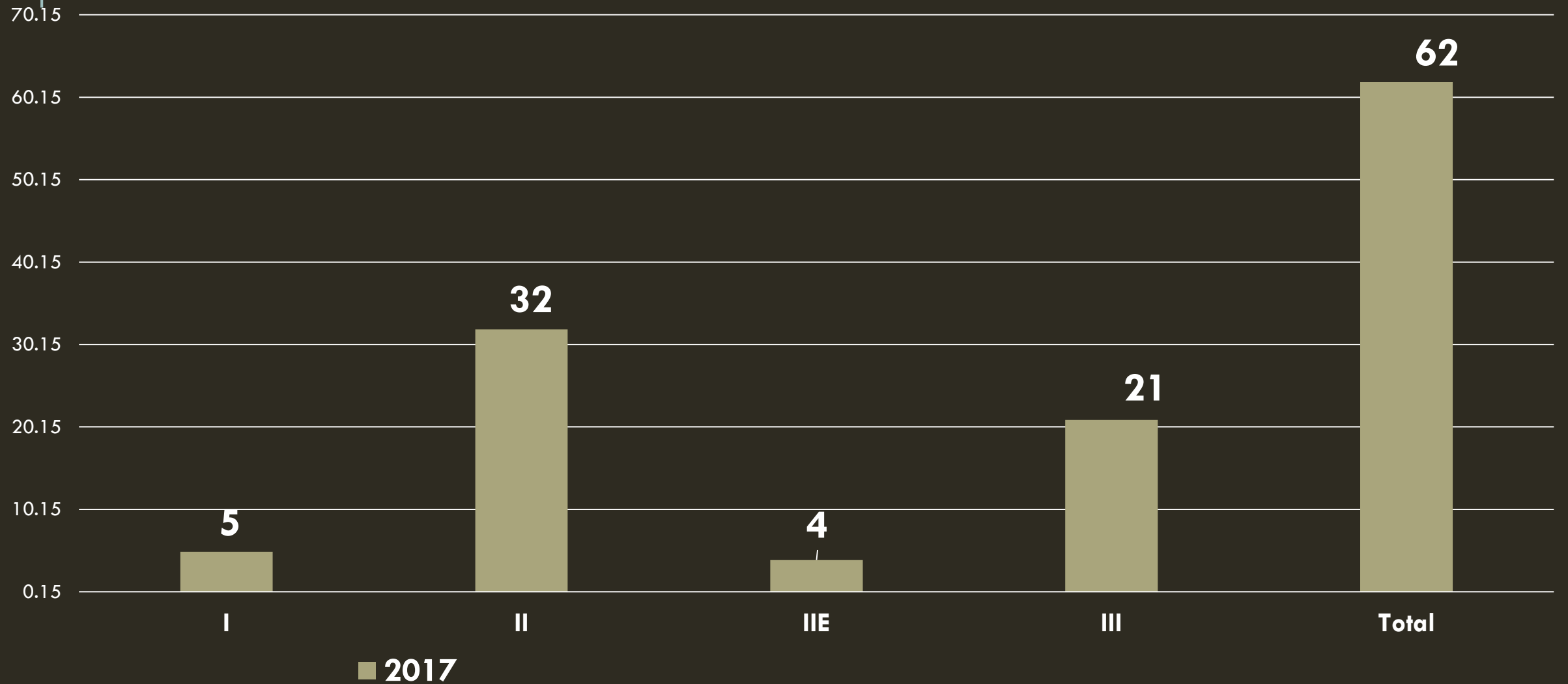
- APT Hospitals range from 0 – 25% - 37 hospitals reporting

2016-2017

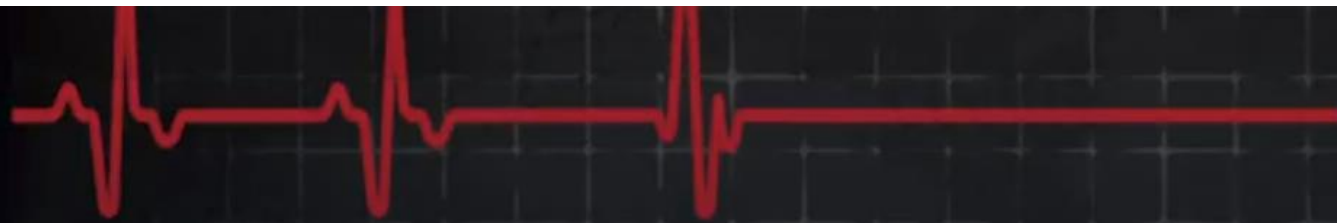
- APT Hospitals range from 0 – 9% - 39 hospitals reporting

%	0	1	2	3	4	5	6	7	8	9	--	25
2015-16	12	8	6	4	2	0	2	0	0	2		1
2016-17	18	2	3	2	5	0	1	2	2	2		0

EARLY ELECTIVE DELIVERIES APT DATA: APT 62 VS ABOUT 90 PER CMS



**MATERNAL AND INFANT
MORBIDITY AND MORTALITY** |

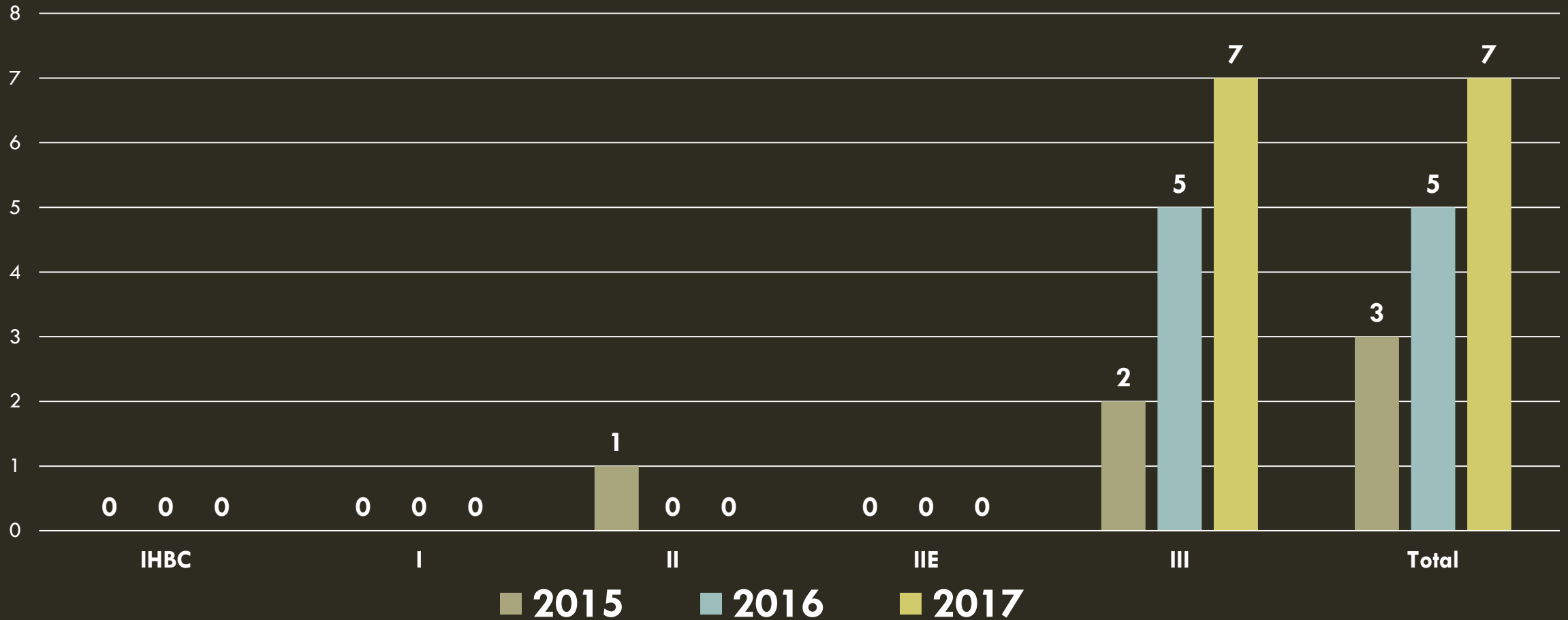


Hospitals know how to protect mothers. They just aren't doing it.

Alison Young, USA TODAY
1:54 p.m. MST July 27, 2018

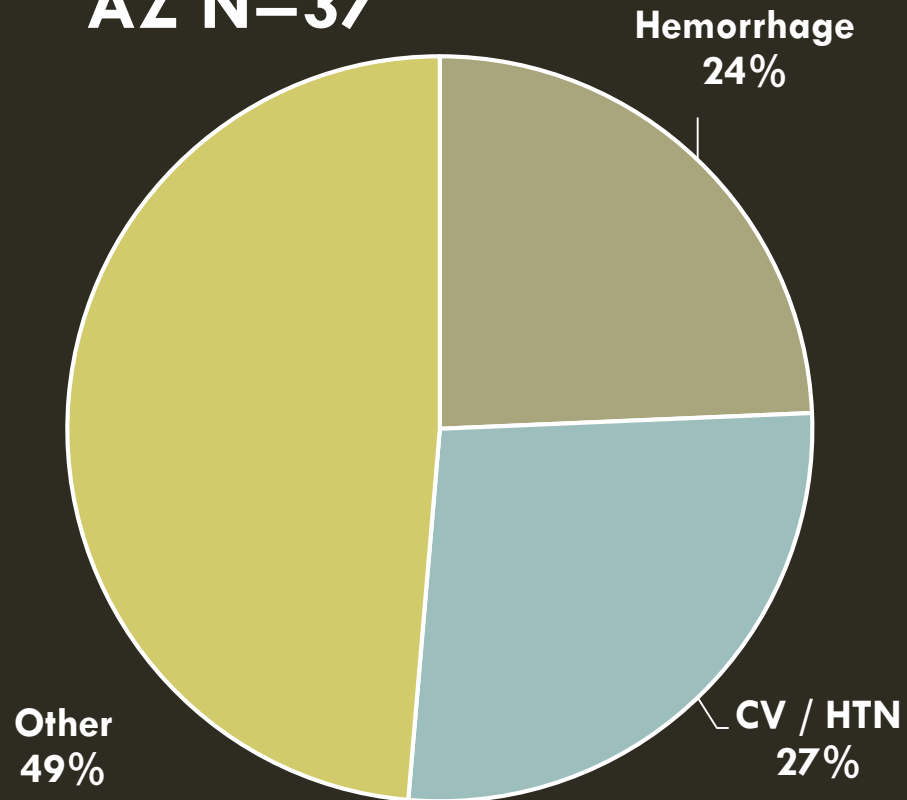
Every year, thousands of women suffer life-altering injuries or die during childbirth because hospitals and medical workers skip safety practices known to head off disaster, a USA TODAY investigation has found.

MAT DEATHS IN APT FACILITIES — DELIVERY ADMISSION 2015-2017

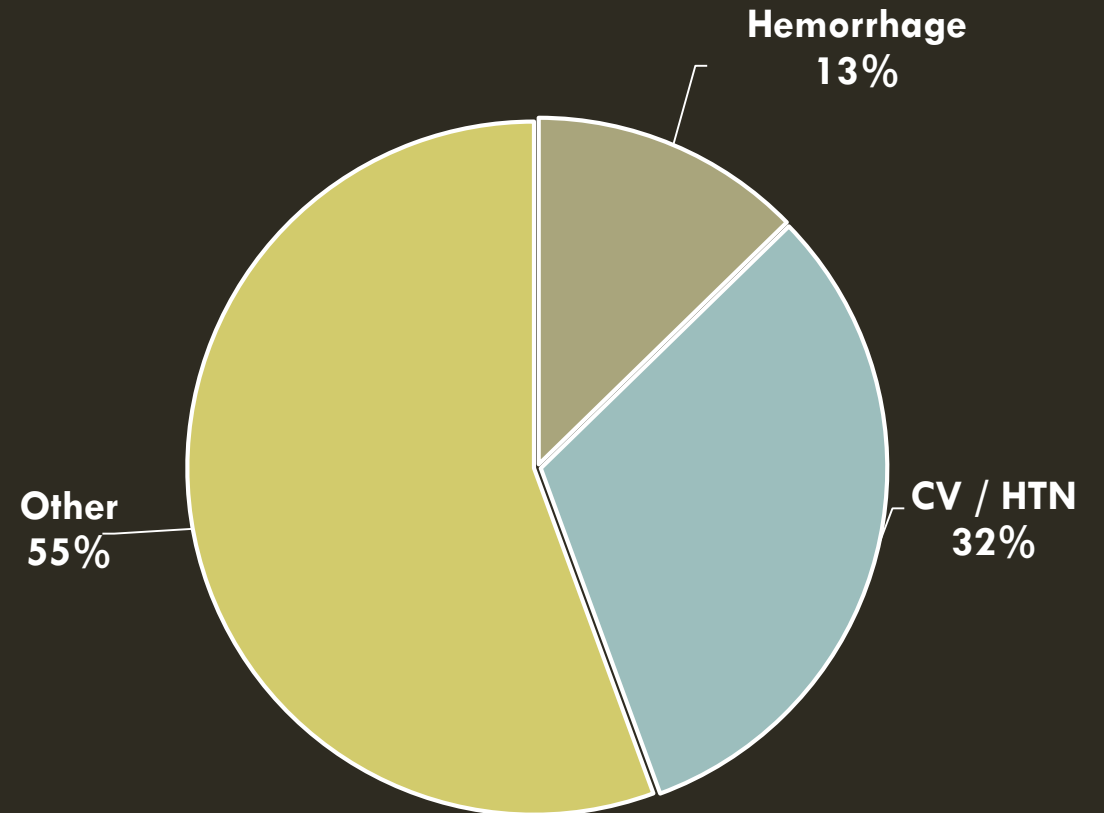


PREGNANCY RELATED DEATHS: AZ VS 4 STATE REPORT

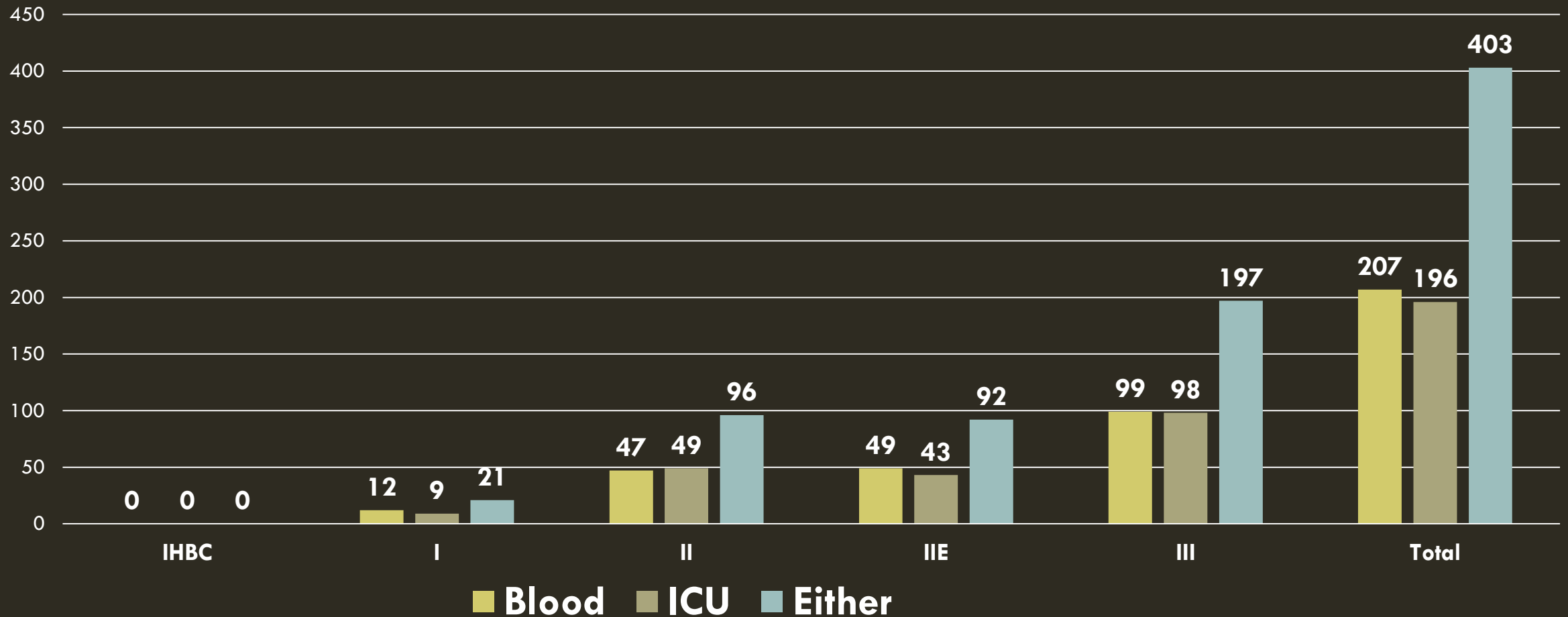
AZ N=37



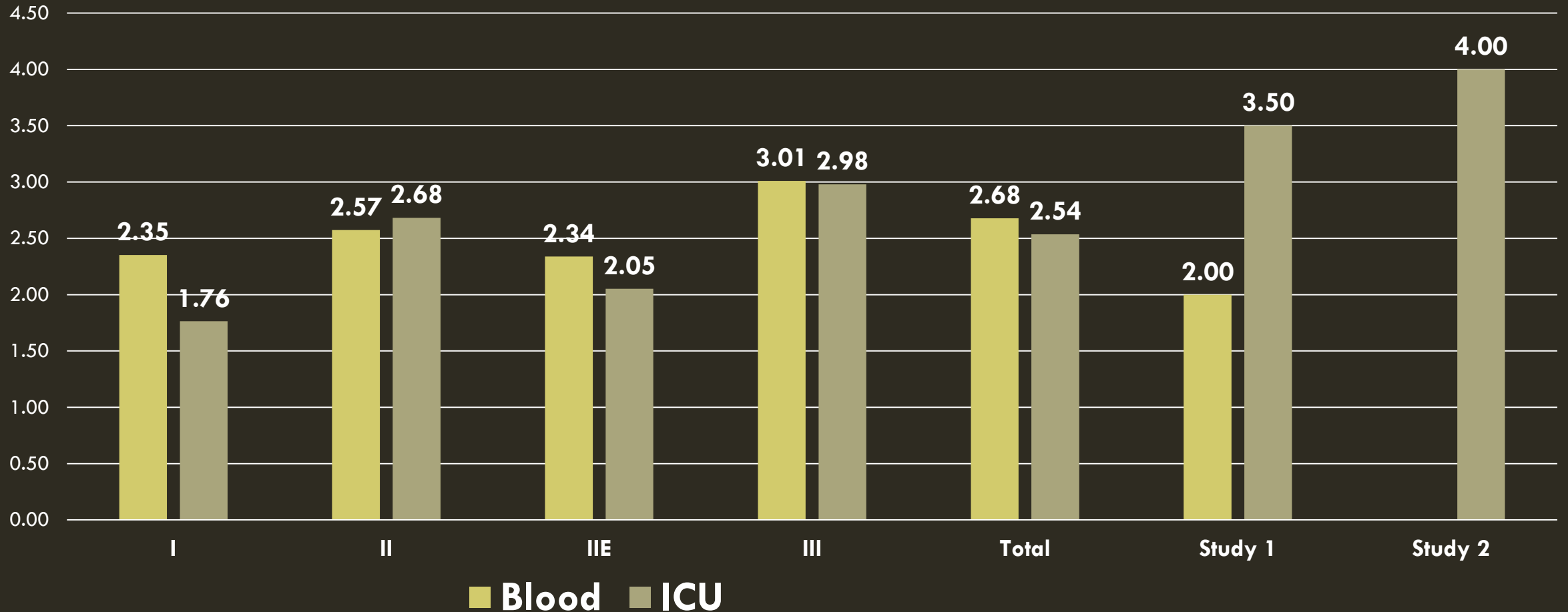
4 State N=175



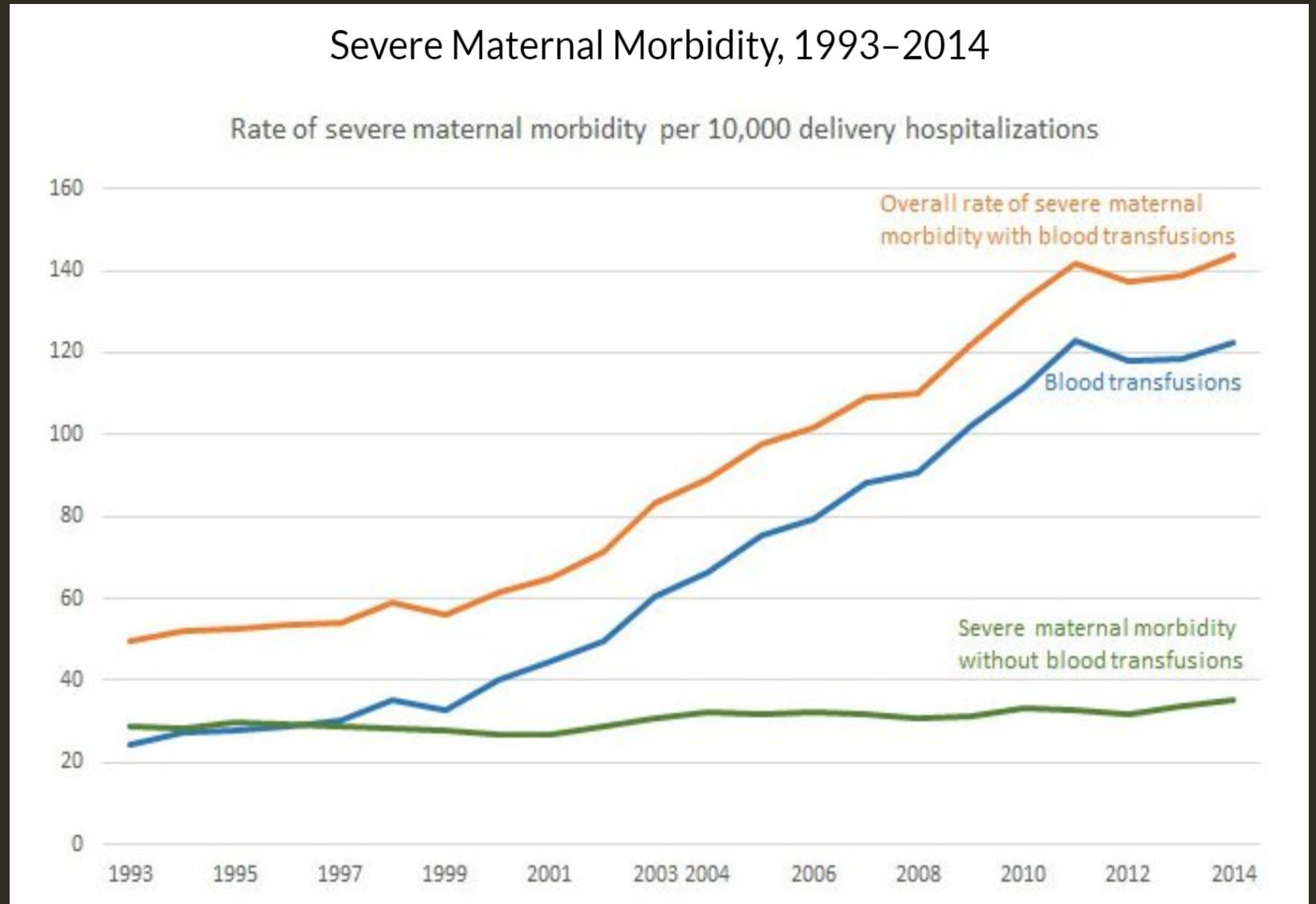
SEVERE MATERNAL MORBIDITY APT



SEVERE MATERNAL MORBIDITY APT RATES PER 1000



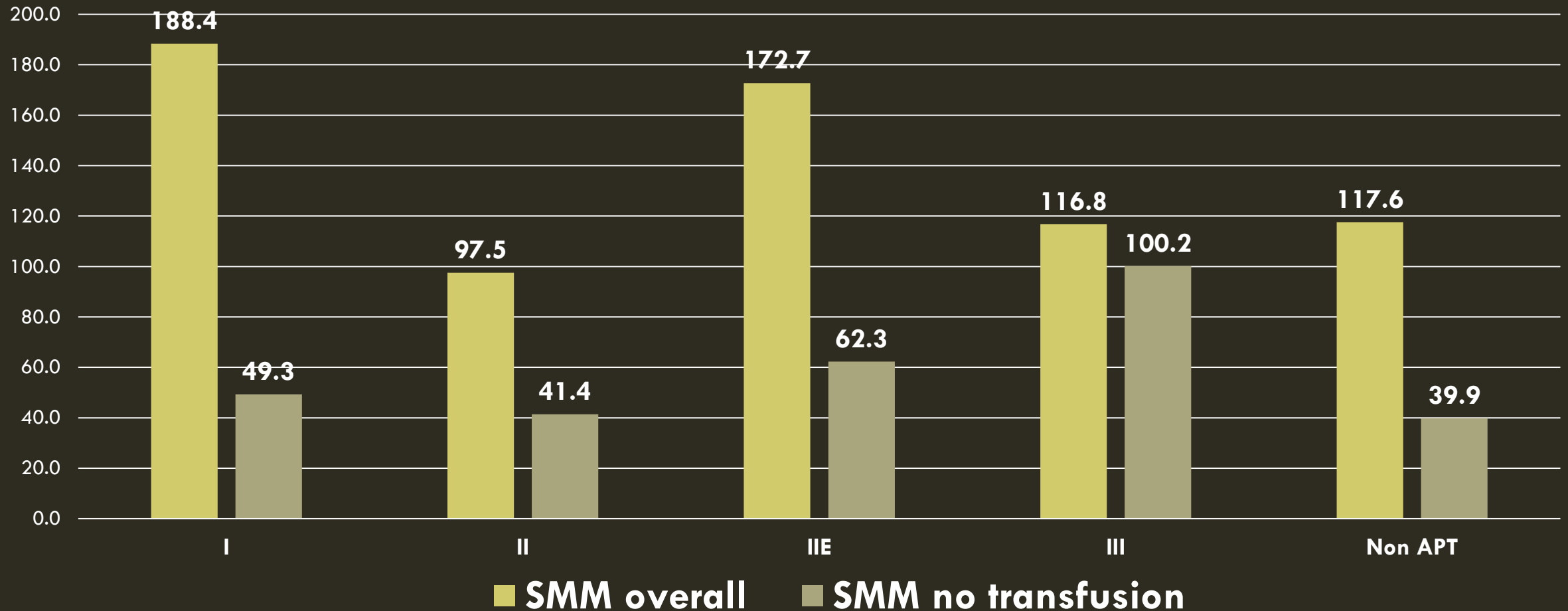
CDC ICD BASED SMM RATES



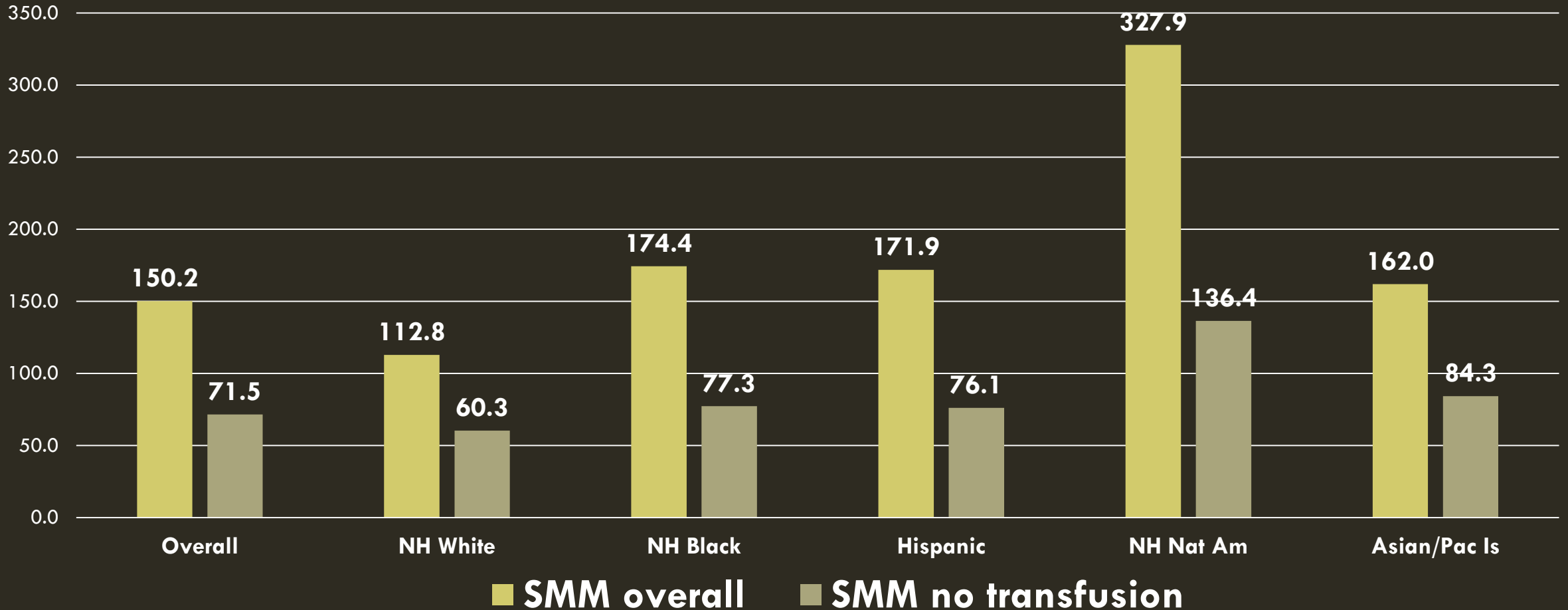
Source: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html>

Accessed 7/27/18

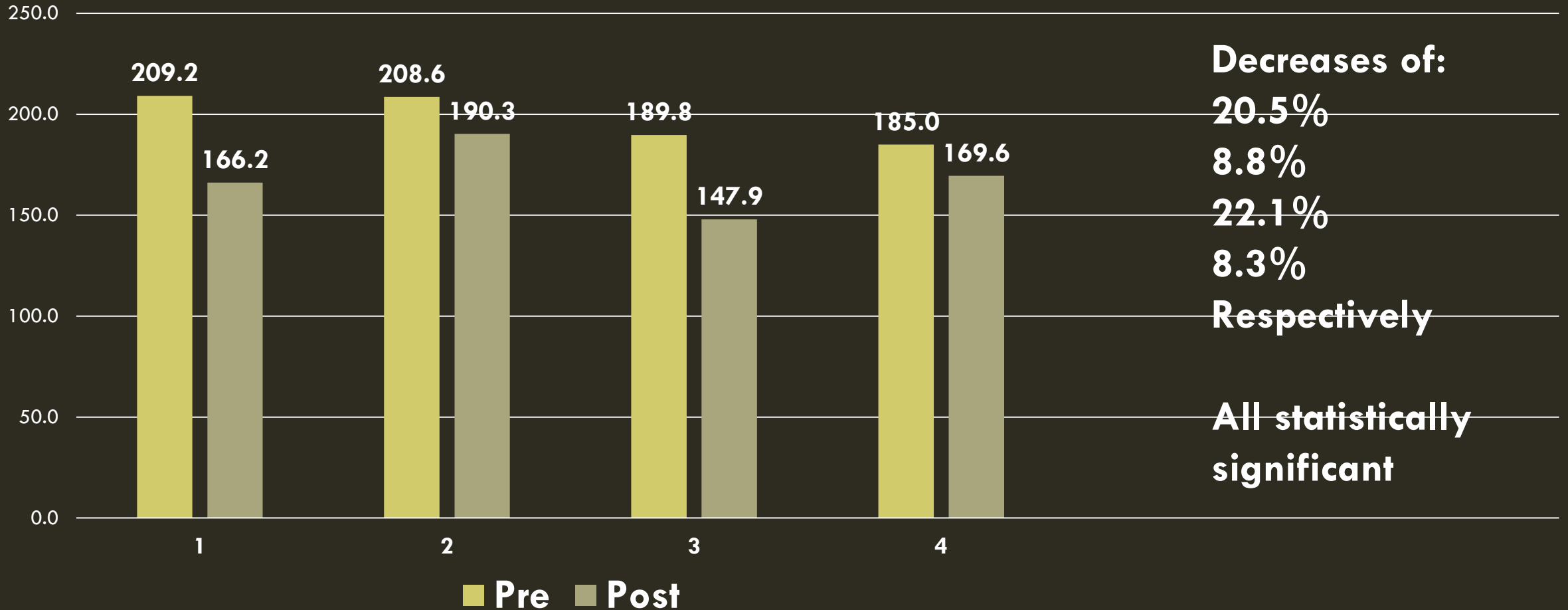
“CDC” SMM ARIZONA 2016 RATES PER 10,000 BY LEVEL



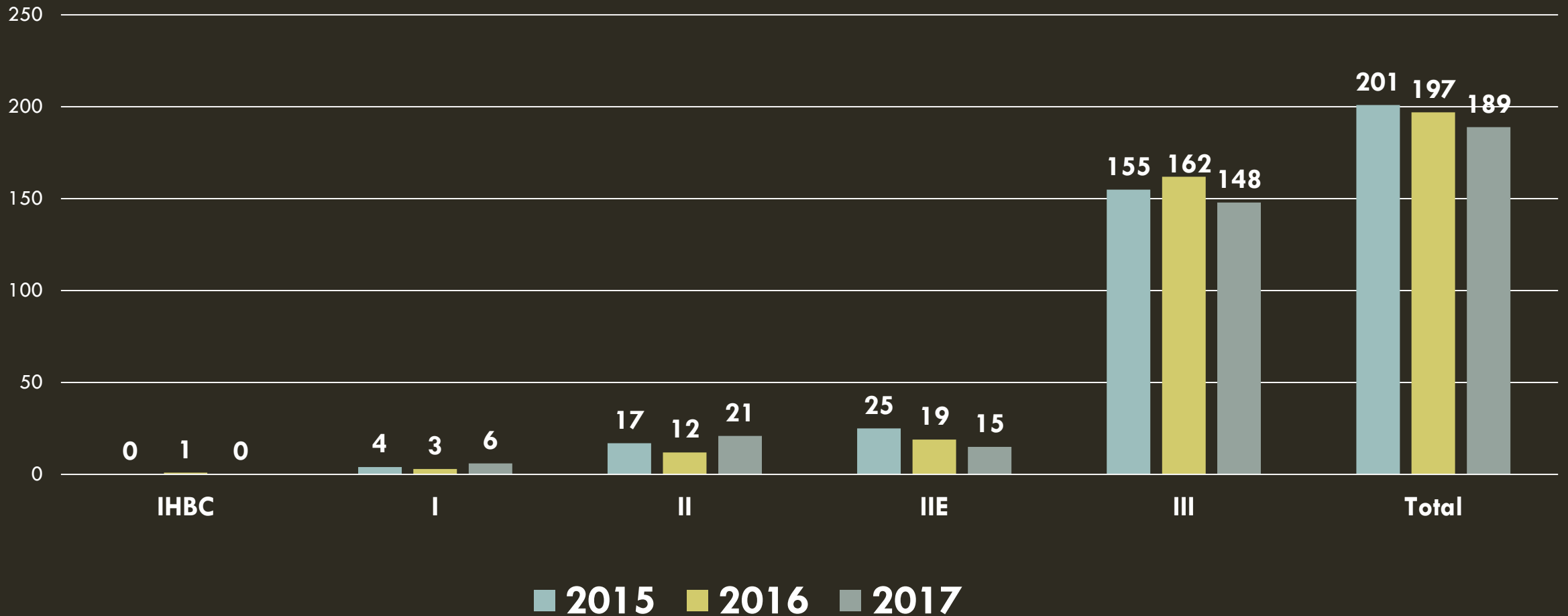
“CDC” SMM ARIZONA 2016 RATES PER 10,000



AIM STATE OVERALL SMM 4 COHORT RESULTS RATES PER 10,000

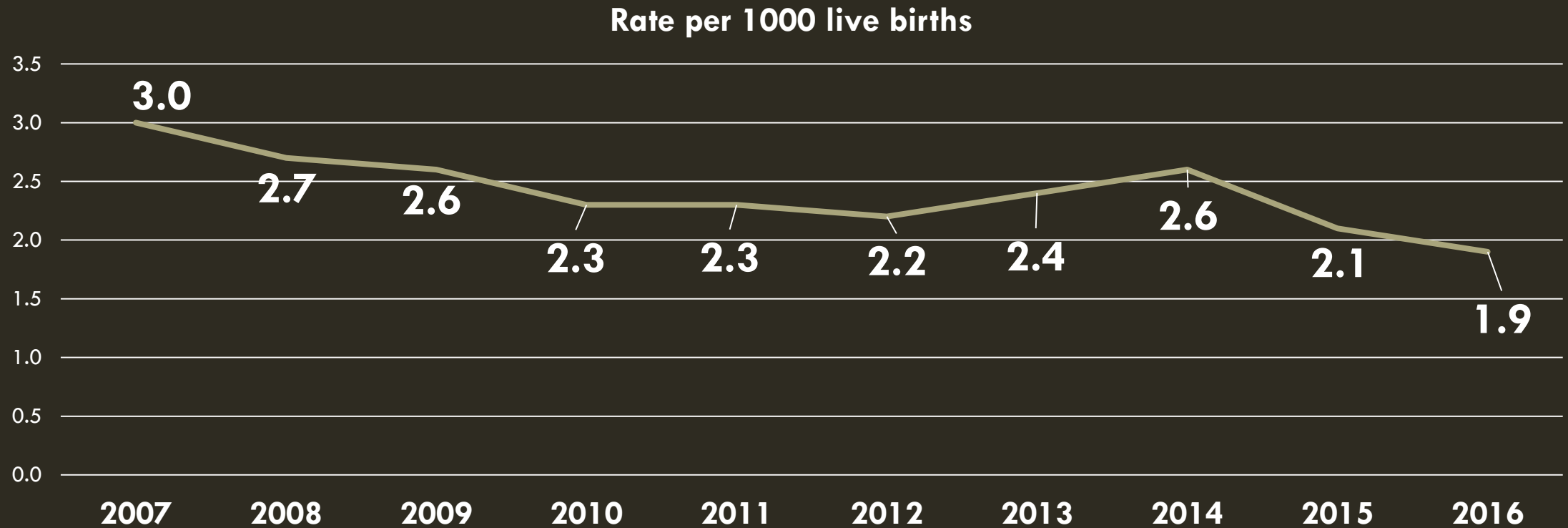


NEONATAL DEATHS IN APT FACILITIES — 2015-2017



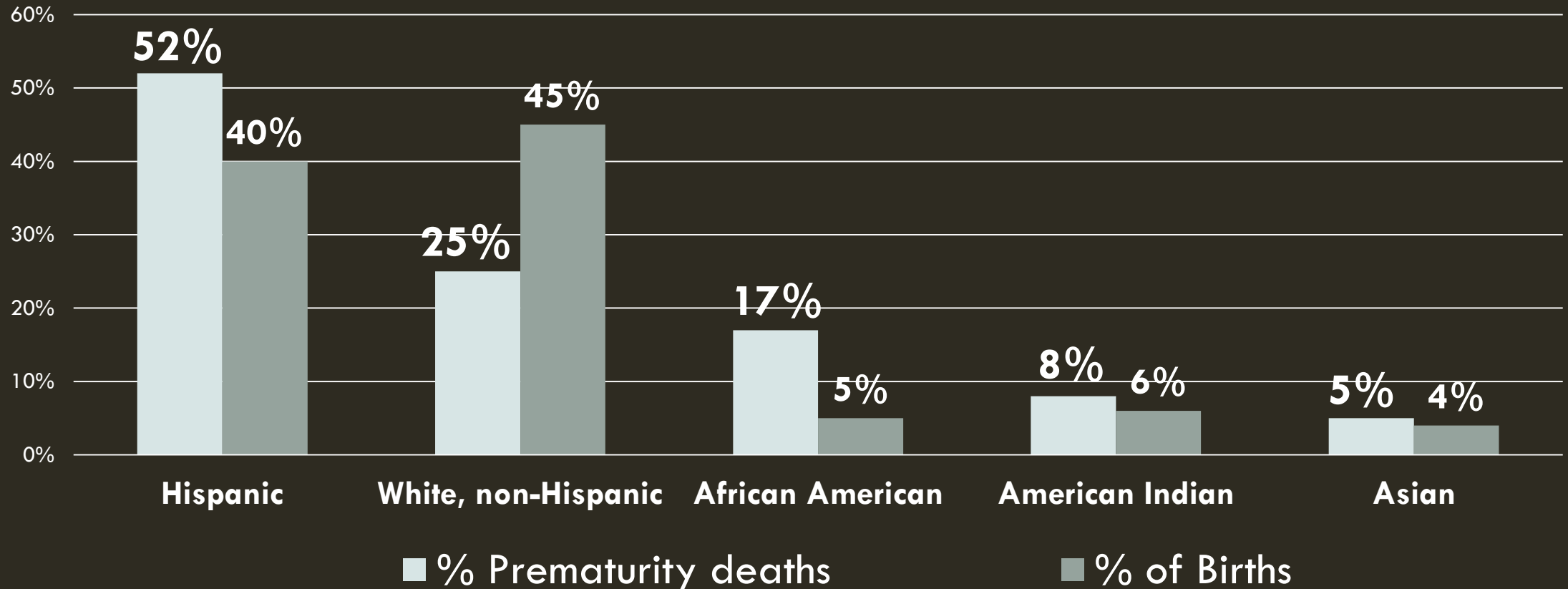
RATE OF CHILD DEATHS DUE TO PREMATUREITY

BORN BEFORE 37 WEEKS WITH NO UNDERLYING CAUSE OF DEATH OTHER THAN PREMATUREITY



CHILD DEATHS DUE TO PREMATUREITY - DISPARITY

BORN BEFORE 37 WEEKS WITH NO UNDERLYING CAUSE OF DEATH OTHER THAN PREMATUREITY



NEONATAL MORTALITY BY BIRTHWEIGHT ALL LEVELS COMBINED PER 1,000

Birthweight	Number	NMR
<500	100	610.00
500-999	312	179.49
1000-1499	491	32.59
VLBW	903	147.29
LBW	4,793	3.34
2500+	71,997	0.26
4000+	6,141	0.16

Neonatal deaths of those < 500 gm weeks made up 36% of the deaths

NEONATAL MORTALITY BY GESTATIONAL AGE

ALL LEVELS COMBINED PER 1,000

EGA	Number	NMR
<24	73	453.42
24-27	43	143.81
28-31	16	26.76
32-35	17	5.24
36-38	11	0.46
39+	6	0.12

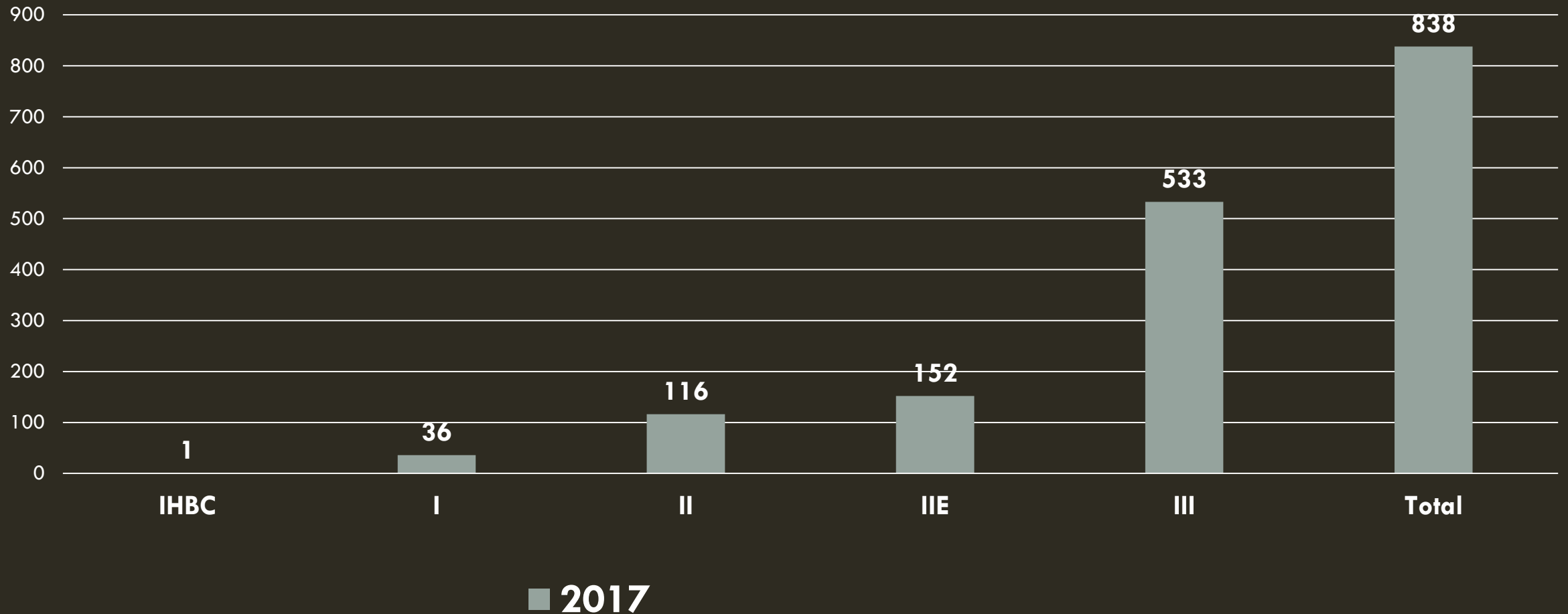
Neonatal deaths
of those < 24
weeks made up
44% of the
deaths

SUID, BY CAUSE (INFANTS <1YR) CHILD FATALITY REPORTS — 2011 - 2016

	2011	2013	2015	2016
Sudden unexplained infant death	114	74	78	80
Death from unsafe sleeping environment	64	65	74	79
Sleeping on side or stomach	36	28	25	24
Bed sharing with adult and/or other children	36	34	36	41

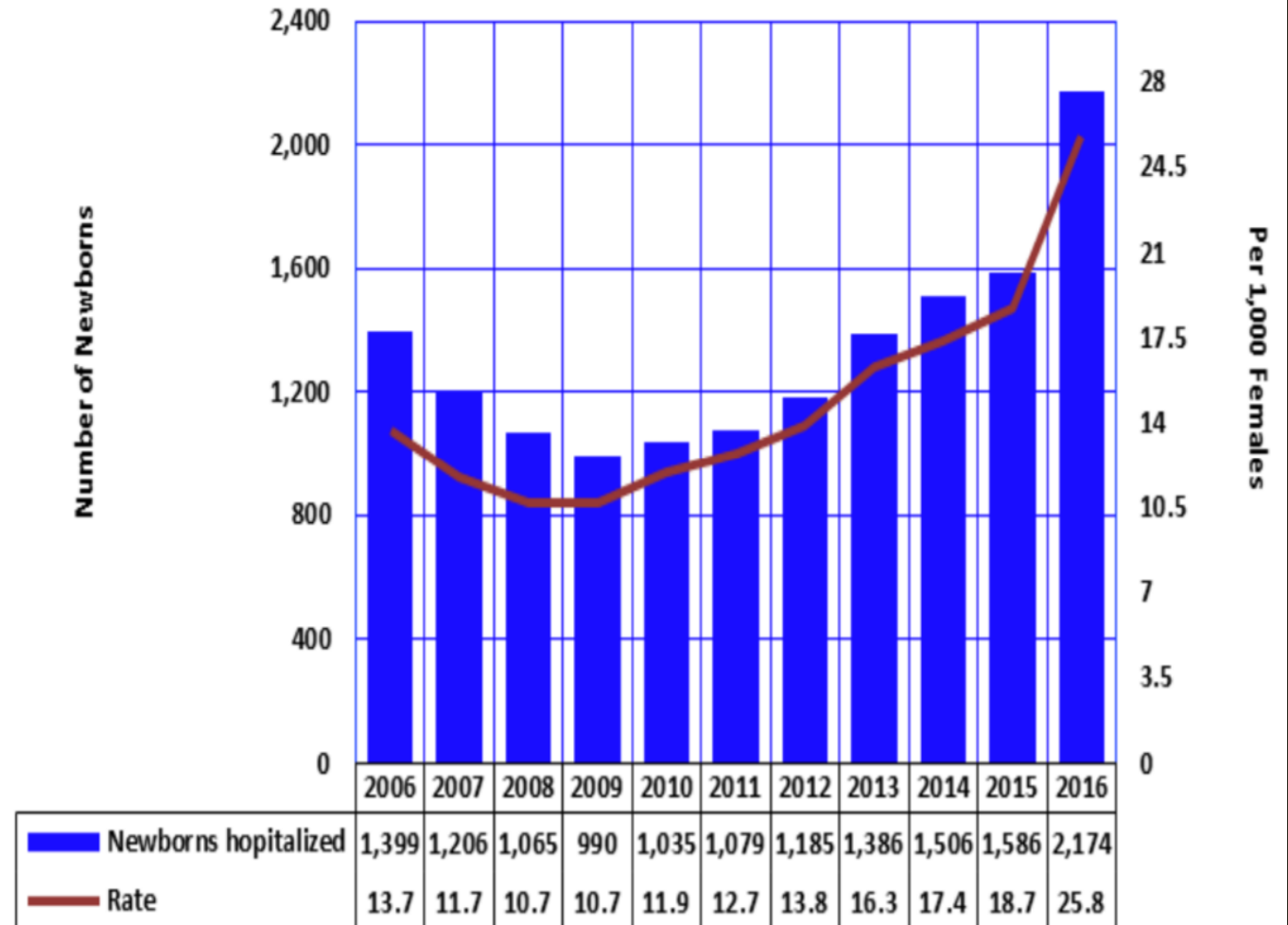
- 93% determined to be preventable.
- African American and American Indian infant deaths disproportionately higher than population they compose.

NAS IN APT FACILITIES



TRENDS IN NEWBORN HOSPITALIZATION DUE TO MATERNAL DRUG USE

Figure 1B-25
Newborns Who Were Hospitalized after Birth because They Were Affected by Maternal Use of Drugs during Pregnancy, Arizona, 2006-2016



Notes: ^a Rate is the number of newborns admitted to Intensive Care Units per 100 births in specified group.

DISCUSSION — APRS/APT QI COMMITTEE GOALS

- Follow IOM's recommendation of "Measure, Report, Improve"
- Investigate methods to leverage routinely collected data for tracking perinatal outcomes
- Facilitate identification of improvement opportunities
- Consider collaborative approaches to perinatal outcome improvement
 - Join AIM?
 - Work on NAS?

AND LET ME SAY.....

Obrigado!

Merci

Thank You

Grazie

Vielen Dank

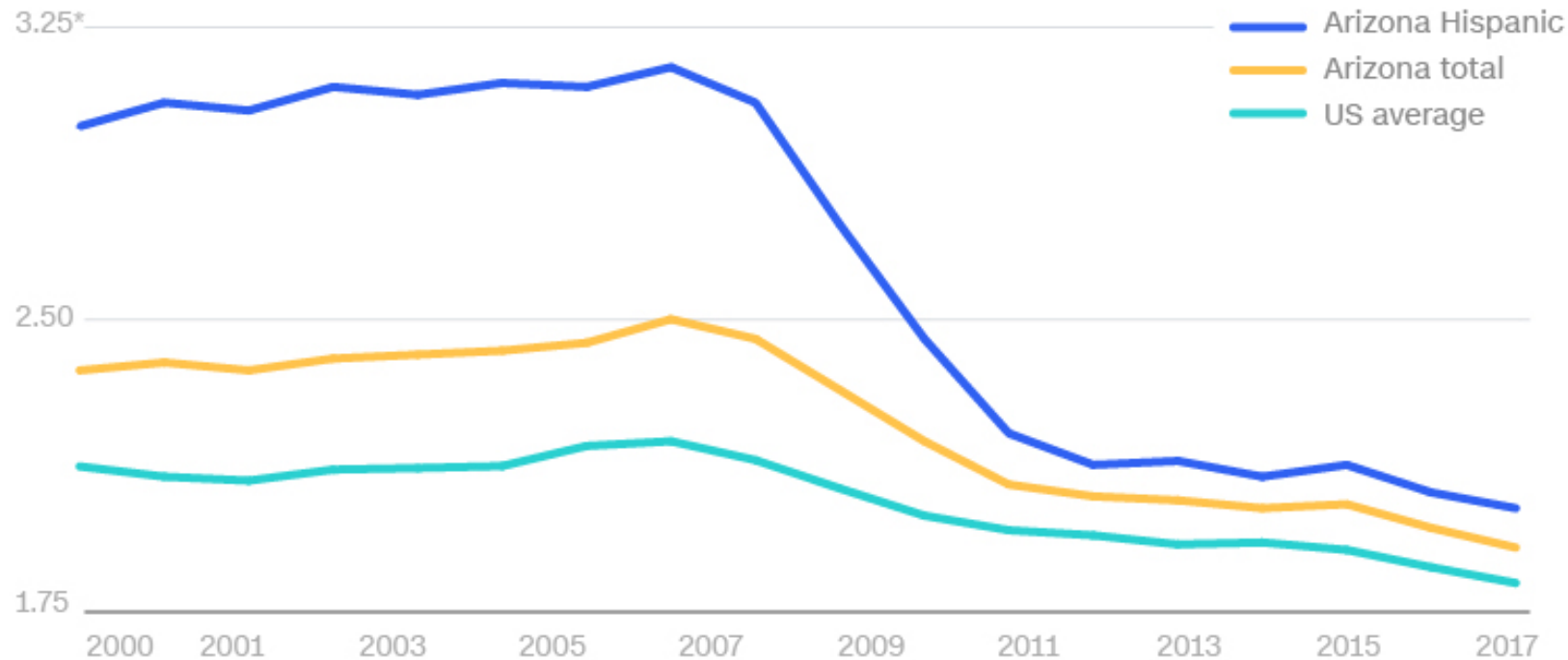
Gracias

Hvala

ARIZONA BIRTH DEMOGRAPHICS

Arizona's plunging birth rate

Hispanic women in particular started having far fewer babies over the past decade.



Source: US Census Bureau, Arizona state demographer

*Number of children born to women ages 15 to 44