Idaho's 2017 National Immunization Survey (NIS)-Teen Results

Takeaways:

- Idaho teens aged 13-15 years have exceeded Healthy People 2020 targets for both Tdap and meningococcal conjugate (MenACWY) vaccine, but there is still work to be done to achieve targets for varicella and HPV vaccination.
- The percentage of Idaho 13-17 year olds with the recommended two doses of varicella vaccine continues to trend upwards hit a new high in 2017 (81.3%), but is still below the national rate.
- Rates of vaccination with at least one dose of meningococcal conjugate have continued to increase among Idaho's 13-17 year olds (90.5%) and are higher than U.S. rates (85.1%) for the third year in a row.
- Less than half of Idaho teenagers aged 13-17 years of age are protected against the cancer-causing human papillomavirus (HPV). Only 52.1% of female and 36.5% of male 13-17 year olds in Idaho are up to date on human papillomavirus (HPV) vaccination.

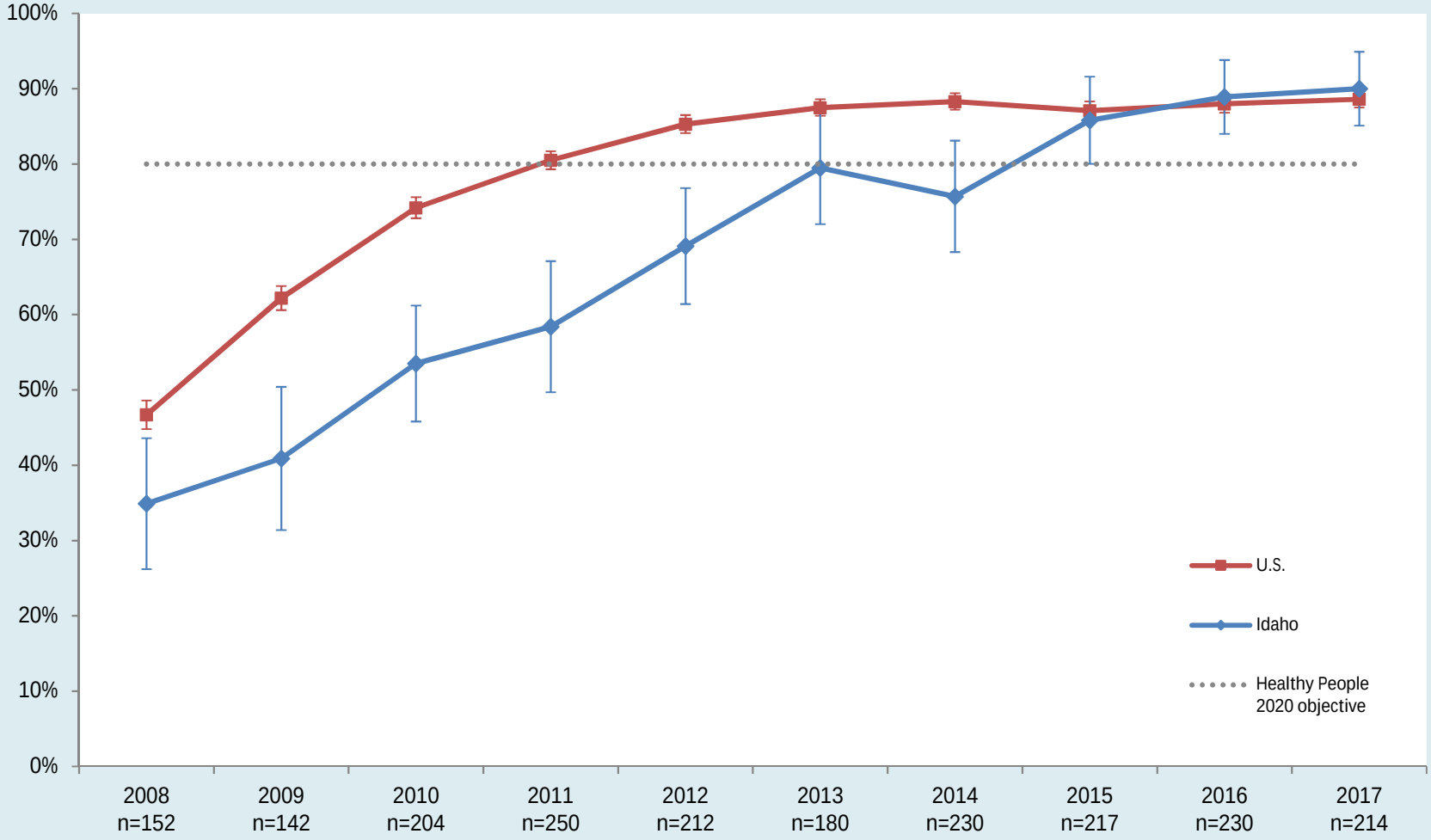
About the NIS-Teen

The NIS-Teen survey (NIS) measures coverage of the following recommended vaccinations: tetanus, diphtheria, acellular pertussis (Tdap); meningococcal conjugate (MenACWY); human papillomavirus (HPV); varicella (VAR); and mumps, measles, and rubella (MMR).

The NIS-Teen utilizes a phone survey to monitor vaccination coverage among teens 13-17 years of age. The survey is sponsored and conducted by the Centers for Disease Control and Prevention's (CDC) National Center for Immunization and Respiratory Diseases (NCIRD) and authorized by the Public Health Service Act [Section 306].

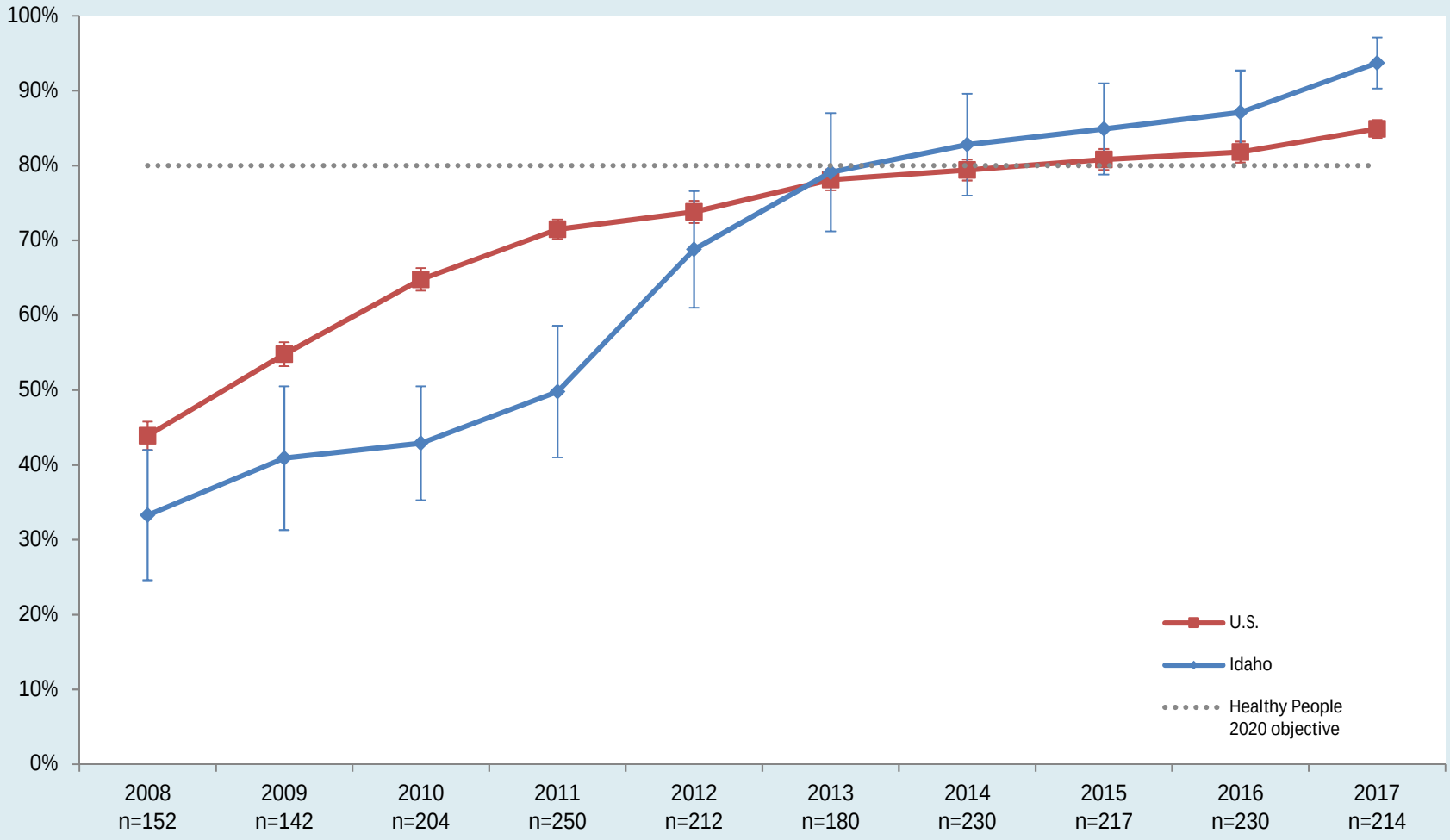
NIS-Teen results provide current, population-based, state and local area estimates of vaccination coverage among teens using a standard survey methodology. The surveys collect data through telephone interviews with parents or guardians in all 50 states, the District of Columbia, and some U.S. territories. Landline and cell phone numbers are randomly selected and called to enroll one or more age-eligible teens from the household. The parents and guardians of eligible teens are asked during the interview for the names of their teen's vaccination providers and permission to contact them. With permission, a questionnaire is also mailed to each teen's vaccination provider(s) to collect information on the types of vaccinations, number of doses, dates of administration, and other administrative data about the health care facility. Estimates of vaccination coverage are determined for teen vaccinations recommended by the Advisory Committee on Immunization Practices (ACIP), and teens are classified as being up to date based on the ACIP-recommended number of doses for each vaccine.

≥1 Tdap* Vaccination Coverage 2008–2017 including Healthy People 2020 objectives among adolescents 13–15 years



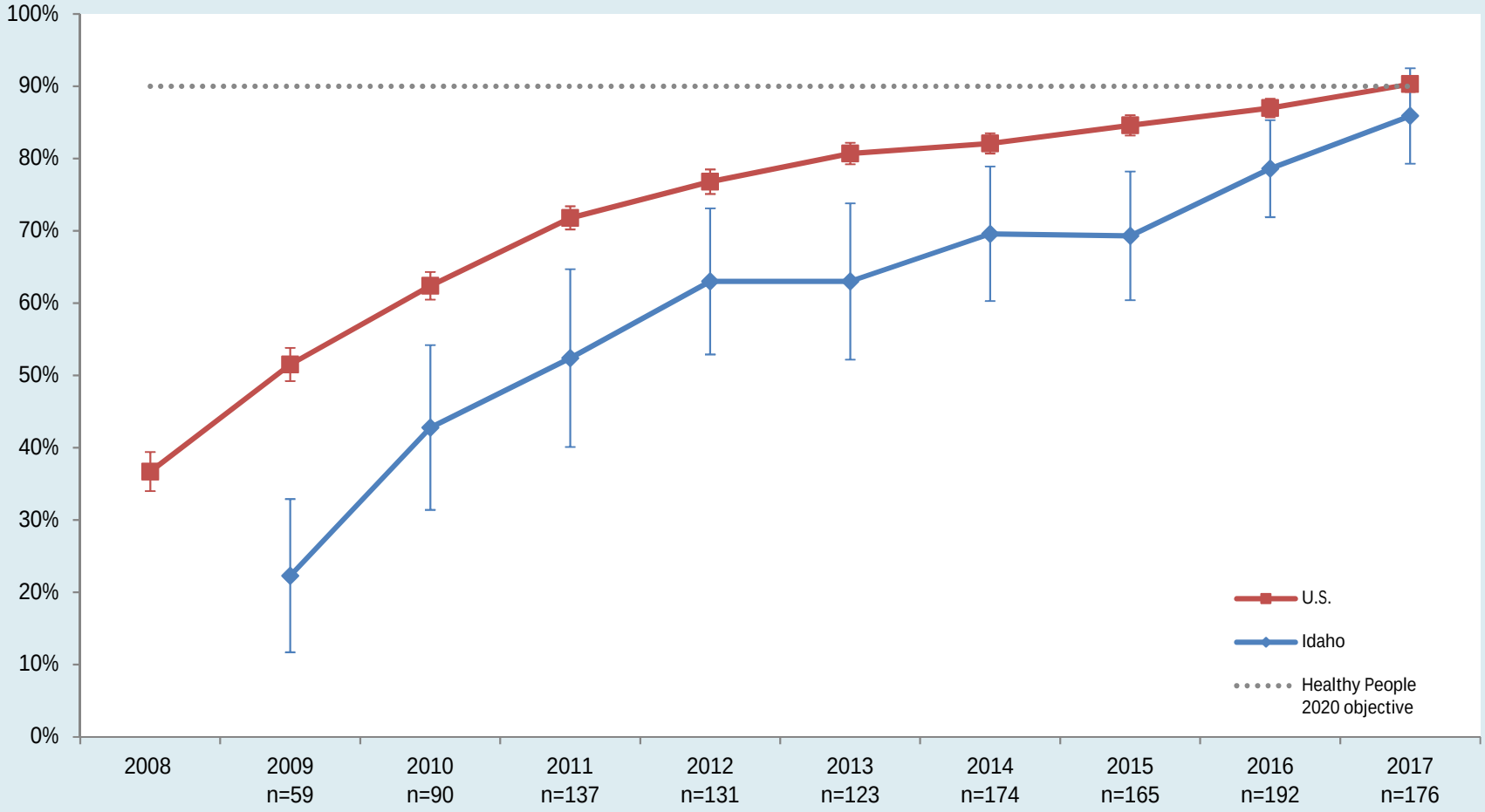
* Refers to ≥1 dose of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) since the age of ten years

≥1 MenACWY* Vaccination Coverage 2008–2017 including Healthy People 2020 objectives among adolescents 13–15 years



* Refers to ≥1 dose of meningococcal conjugate vaccine or meningococcal vaccine of unknown type

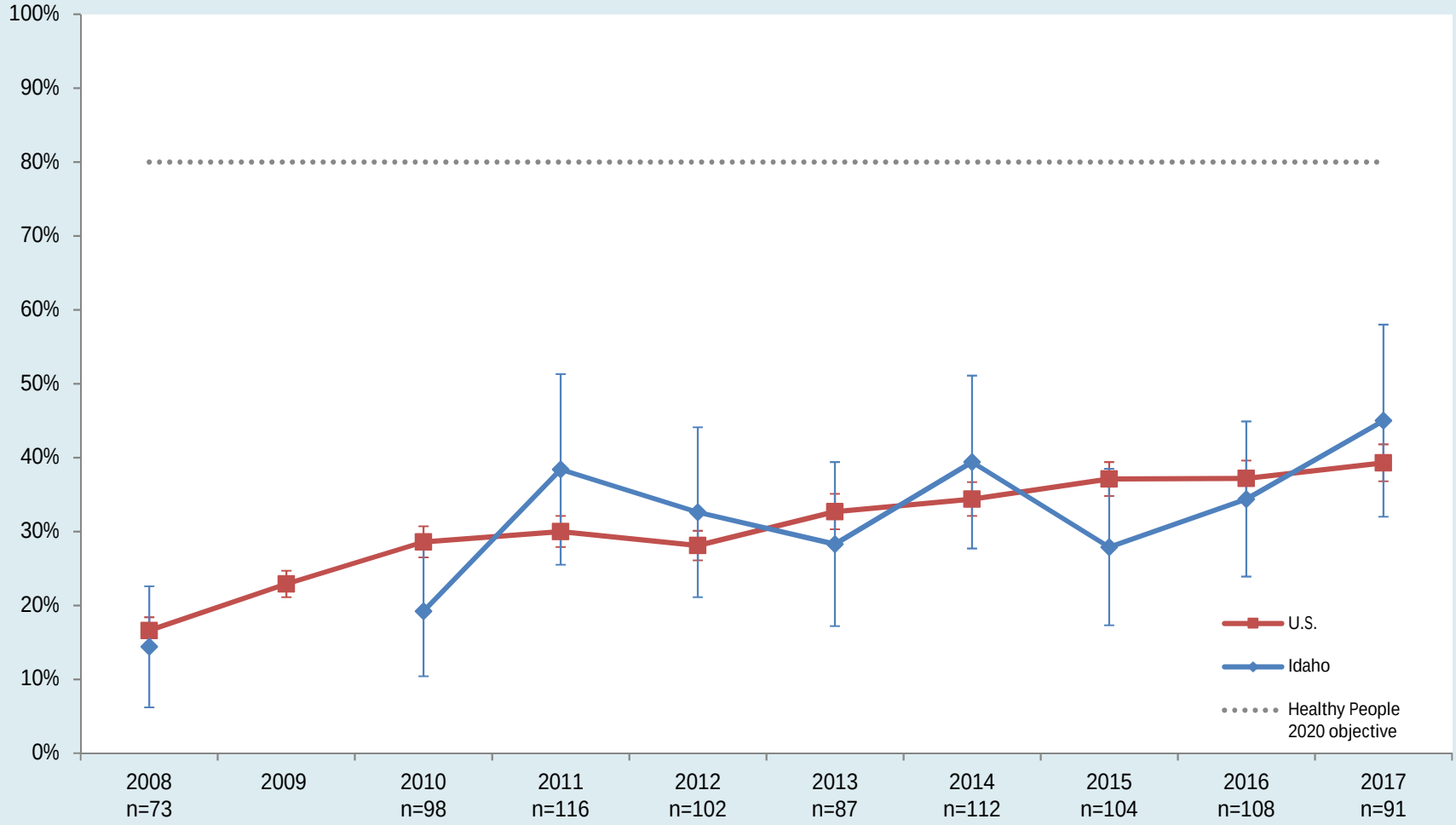
≥2 Varicella* Vaccination Coverage 2008–2017§ including Healthy People 2020 objectives among adolescents 13–15 years



* Refers to 2 or more doses of varicella vaccine, if there is no history of disease

§ This series began national sampling in 2008; data collected for Idaho were insufficient to determine the point estimate prior to 2009

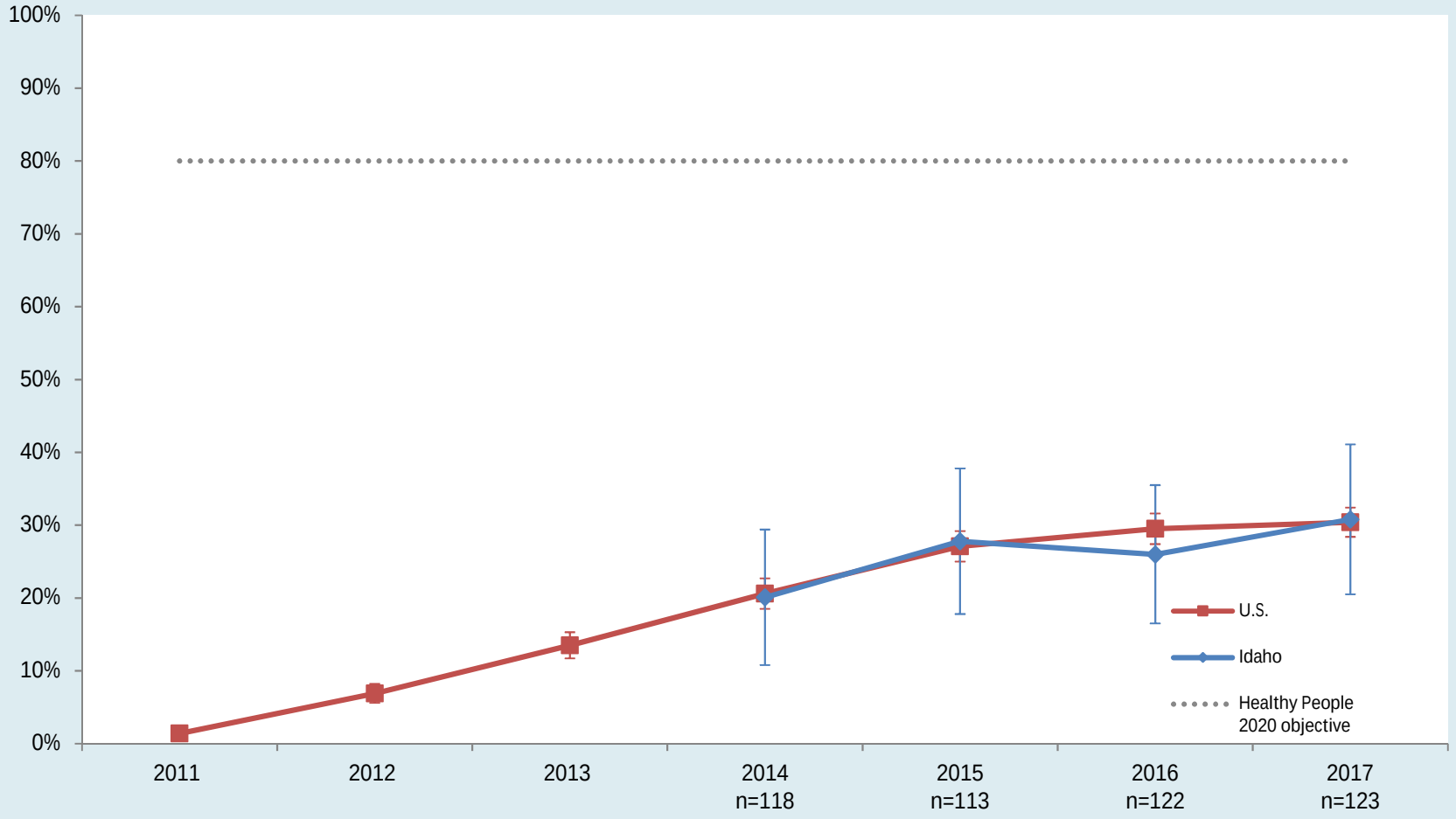
≥3 HPV* Female Vaccination Coverage 2008–2017§ including Healthy People 2020 objectives among adolescents 13–15 years



* Refers to 3 doses of human papillomavirus vaccine, females only

§ This series began national sampling in 2008; data collected for Idaho were insufficient to determine the point estimate for 2009

≥3 HPV* Male Vaccination Coverage 2011–2017§ including Healthy People 2020 objectives among adolescents 13–15 years



* Refers to ≥3 dose of human papillomavirus vaccine, males only

§ This series began national sampling in 2011, data collected for Idaho were insufficient to determine point estimates prior to 2014

National Immunization Survey–Teen Data for United States and Idaho among adolescents 13–15 years 2008 through 2017

	≥1 Tdap							≥1 MenACWY						
		CI			CI				CI			CI		
	U.S.	–	+	Idaho	–	+	Healthy People 2020 objective	U.S.	–	+	Idaho	–	+	Healthy People 2020 objective
2008 n=152	46.7	1.9	1.9	34.9	8.7	8.7	80.0	43.9	1.9	1.9	33.3	8.7	8.7	80.0
2009 n=142	62.2	1.6	1.6	40.9	9.5	9.5	80.0	54.8	1.6	1.6	40.9	9.6	9.6	80.0
2010 n=204	74.2	1.4	1.4	53.5	7.7	7.7	80.0	64.8	1.5	1.5	42.9	7.6	7.6	80.0
2011 n=250	80.5	1.2	1.2	58.4	8.7	8.7	80.0	71.5	1.3	1.3	49.8	8.8	8.8	80.0
2012 n=212	85.3	1.2	1.2	69.1	7.7	7.7	80.0	73.8	1.5	1.5	68.8	7.8	7.8	80.0
2013 n=180	87.5	1.1	1.1	79.5	7.5	7.5	80.0	78.1	1.4	1.4	79.1	7.9	7.9	80.0
2014 n=230	88.3	1.1	1.1	75.7	7.4	7.4	80.0	79.4	1.4	1.4	82.8	6.8	6.8	80.0
2015 n=217	87.1	1.2	1.2	85.8	5.8	5.8	80.0	80.8	1.4	1.4	84.9	6.1	6.1	80.0
2016 n=230	88.0	1.2	1.2	88.9	4.9	4.9	80.0	81.8	1.4	1.4	87.1	5.6	5.6	80.0
2017 n=214	88.6	1.1	1.1	90.0	4.9	4.9	80.0	84.9	1.2	1.2	93.7	3.4	3.4	80.0

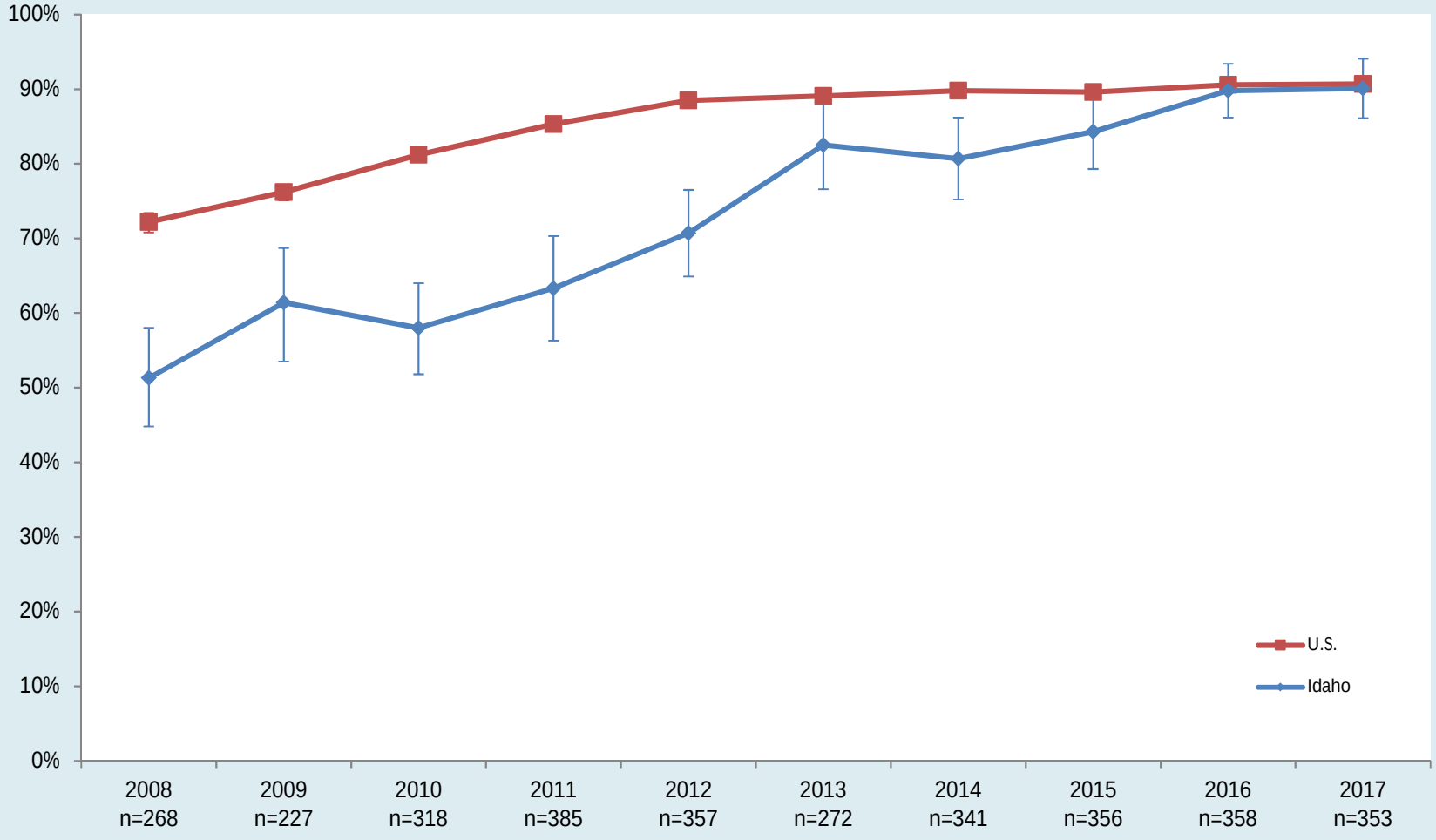
	≥2 VAR						
		CI			CI		
	U.S.	–	+	Idaho	–	+	Healthy People 2020 objective
2008	36.7	2.7	2.7				90.0
2009 n=59	51.5	2.3	2.3	22.3	10.6	10.6	90.0
2010 n=90	62.4	1.9	1.9	42.8	11.4	11.4	90.0
2011 n=137	71.8	1.6	1.6	52.4	12.3	12.3	90.0
2012 n=131	76.8	1.7	1.7	63.0	10.1	10.1	90.0
2013 n=123	80.7	1.5	1.5	63.0	10.8	10.8	90.0
2014 n=174	82.1	1.4	1.4	69.6	9.3	9.3	90.0
2015 n=165	84.6	1.4	1.4	69.3	8.9	8.9	90.0
2016 n=192	87.0	1.3	1.3	78.6	6.7	6.7	90.0
2017 n=176	90.3	1.1	1.1	85.9	6.6	6.6	90.0

	≥3 HPV vaccine (females)						
		CI			CI		
	U.S.	–	+	Idaho	–	+	Healthy People 2020 objective
2008 n=73	16.6	1.8	1.8	14.4	8.2	8.2	80.0
2009	22.9	1.8	1.8				80.0
2010 n=98	28.6	2.1	2.1	19.2	8.8	8.8	80.0
2011 n=116	30.0	2.1	2.1	38.4	12.9	12.9	80.0
2012 n=102	28.1	2.0	2.0	32.6	11.5	11.5	80.0
2013 n=87	32.7	2.4	2.4	28.3	11.1	11.1	80.0
2014 n=112	34.4	2.3	2.3	39.4	11.7	11.7	80.0
2015 n=104	37.1	2.3	2.3	27.9	10.6	10.6	80.0
2016 n=108	37.2	2.4	2.4	34.4	10.5	10.5	80.0
2017 n=91	39.3	2.5	2.5	45.0	13.0	13.0	80.0

	≥3 HPV vaccine (males)						
		CI			CI		
	U.S.	–	+	Idaho	–	+	Healthy People 2020 objective
2008							
2009							
2010							
2011	1.4	0.5	0.5				80.0
2012	6.9	1.3	1.3				80.0
2013	13.5	1.8	1.8				80.0
2014 n=118	20.6	2.1	2.1	20.1	9.3	9.3	80.0
2015 n=113	27.1	2.1	2.1	27.8	10.0	10.0	80.0
2016 n=122	29.5	2.1	2.1	26.0	9.5	9.5	80.0
2017 n=123	30.4	2.0	2.0	30.8	10.3	10.3	80.0

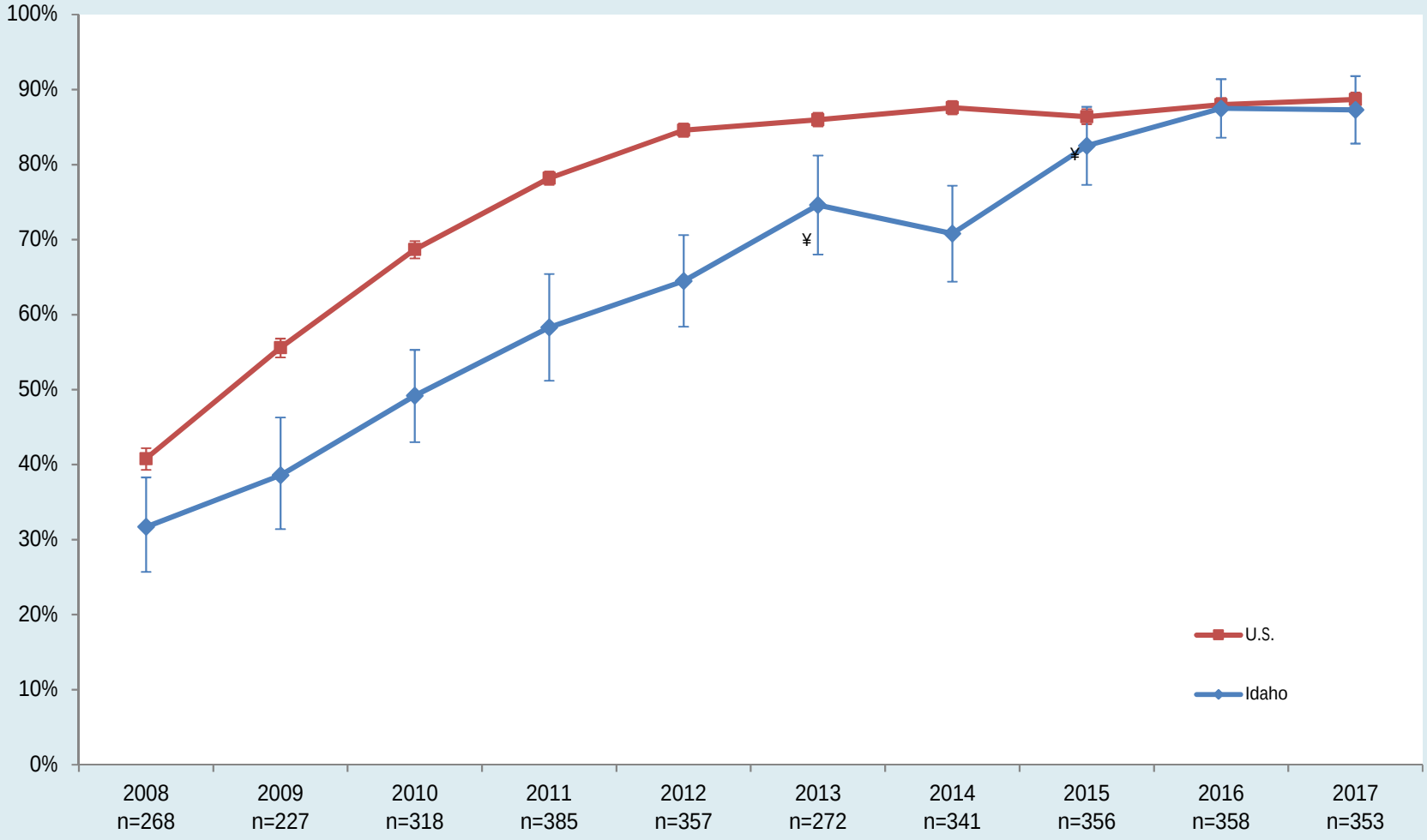
Idaho data points in BOLD indicate a statistically significant change compared with the previous year, p=0.05
Blue cells indicate NIS did not collect data during that year
Brown cells indicate data collected for Idaho was insufficient to determine point estimate
CI = Confidence Interval
2013 data were revised by NIS in 2014 to have a more inclusive definition of adequate provider data

≥1 Td or Tdap* Vaccination Coverage 2008–2017 among adolescents 13–17 years



* Refers to ≥1 dose of tetanus toxoid-diphtheria vaccine (Td) or tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) since the age of ten years

≥1 Tdap* Vaccination Coverage 2008–2017 among adolescents 13–17 years



* Refers to ≥1 dose of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) since the age of ten years
¥ Refers to a statistically significant change compared with the previous year, p=0.05

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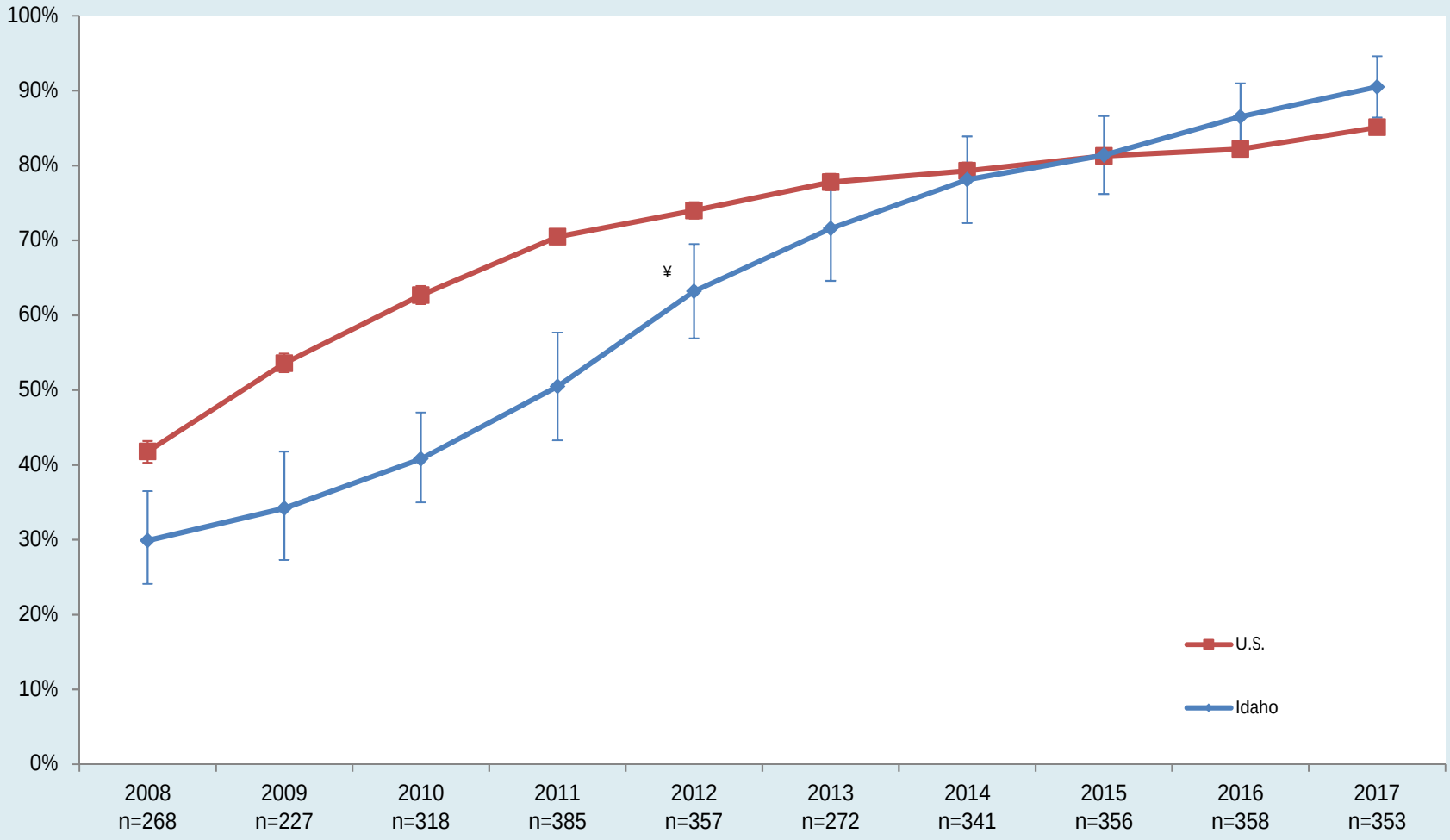
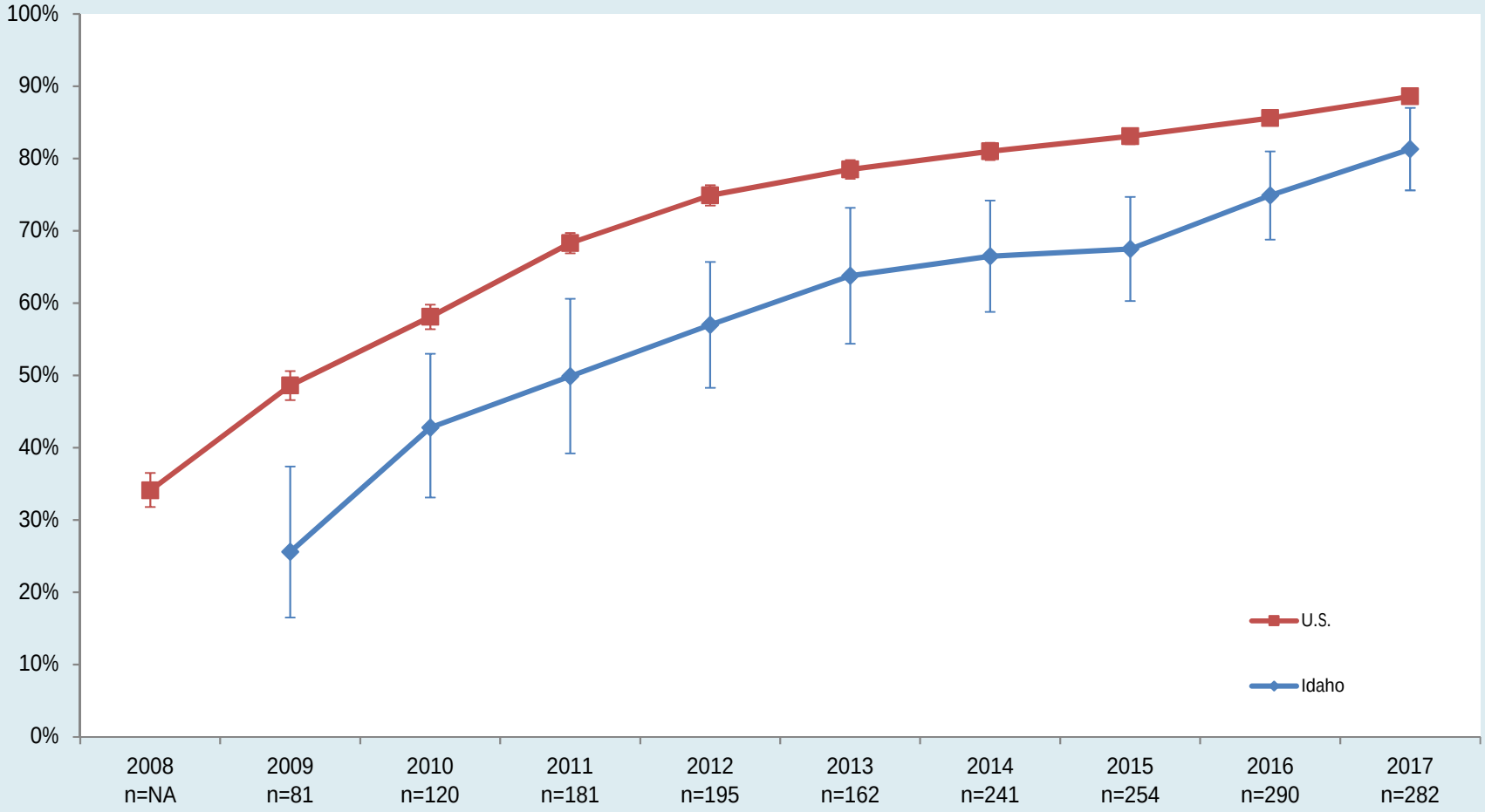
≥1 MenACWY* Vaccination Coverage 2008–2017 among adolescents 13–17 years



* Refers to ≥1 dose of meningococcal conjugate vaccine or meningococcal vaccine of unknown type
¥ Refers to a statistically significant change compared with the previous year, p=0.05

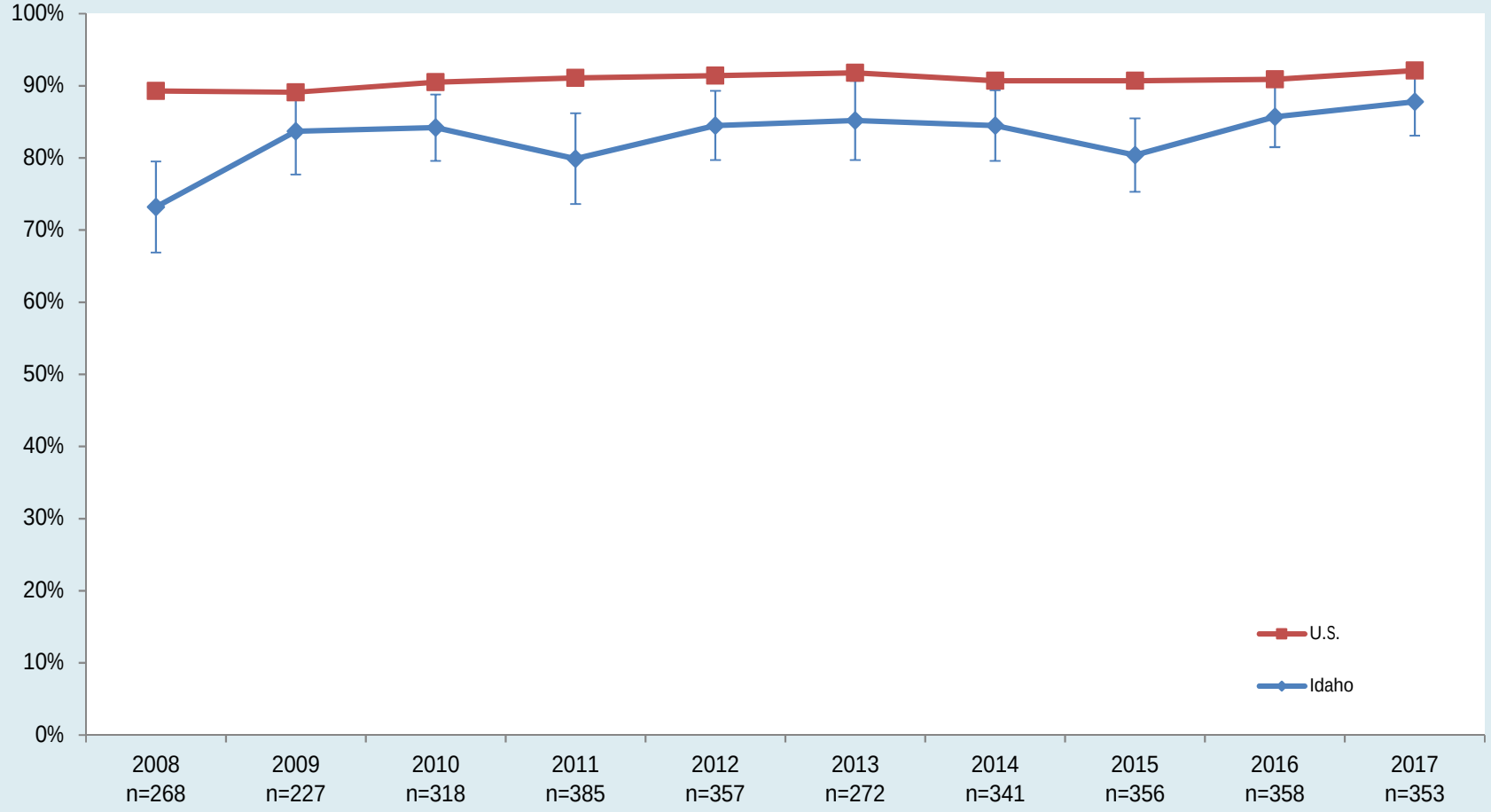
≥2 Varicella* Vaccination Coverage 2008–2017§ among adolescents 13–17 years



* Refers to 2 or more doses of varicella vaccine, if there is no history of disease

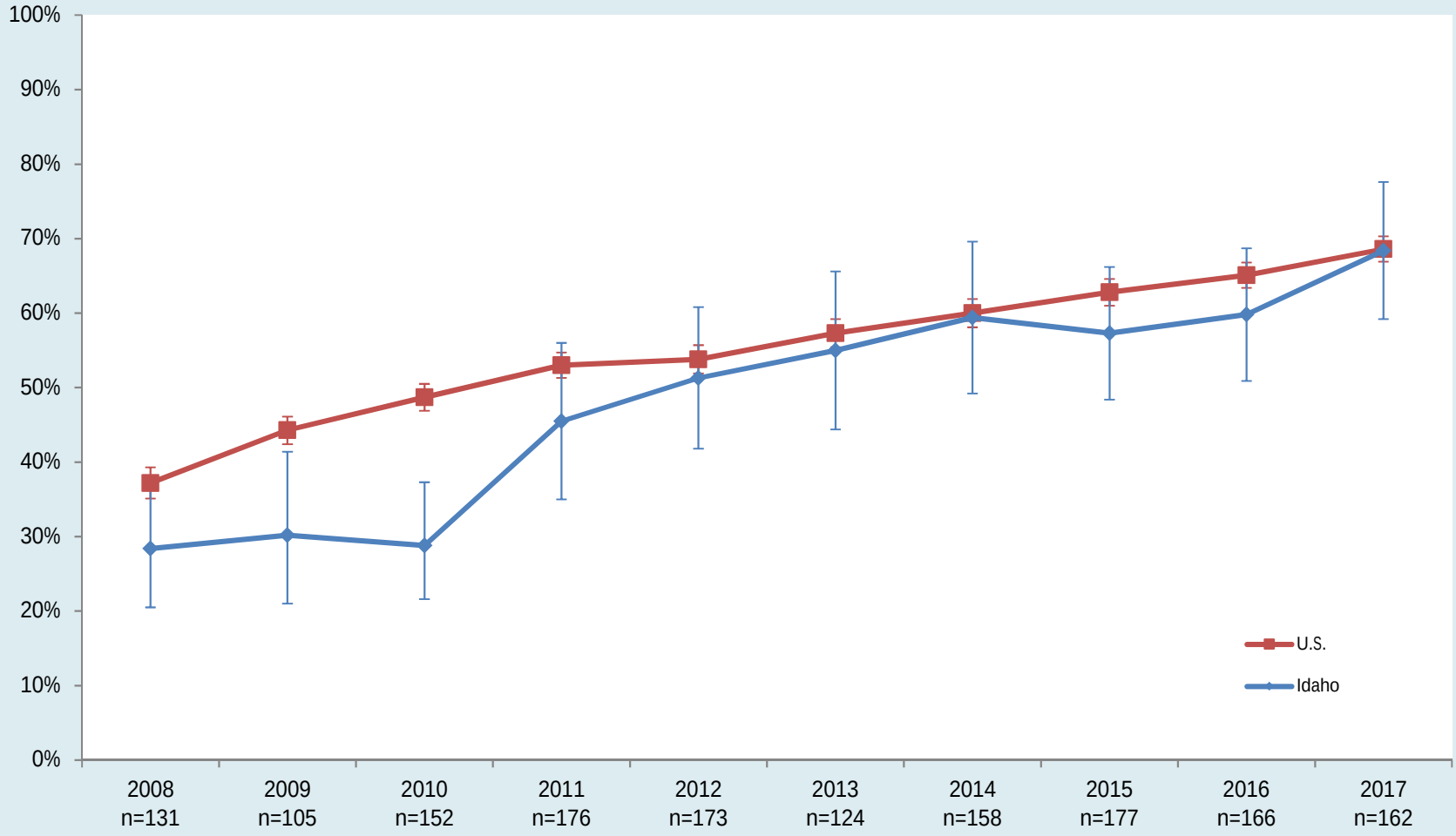
§ This series began national sampling in 2008; data collected for Idaho were insufficient to determine the point estimate prior to 2009

≥2 MMR* Vaccination Coverage 2008–2017 among adolescents 13–17 years



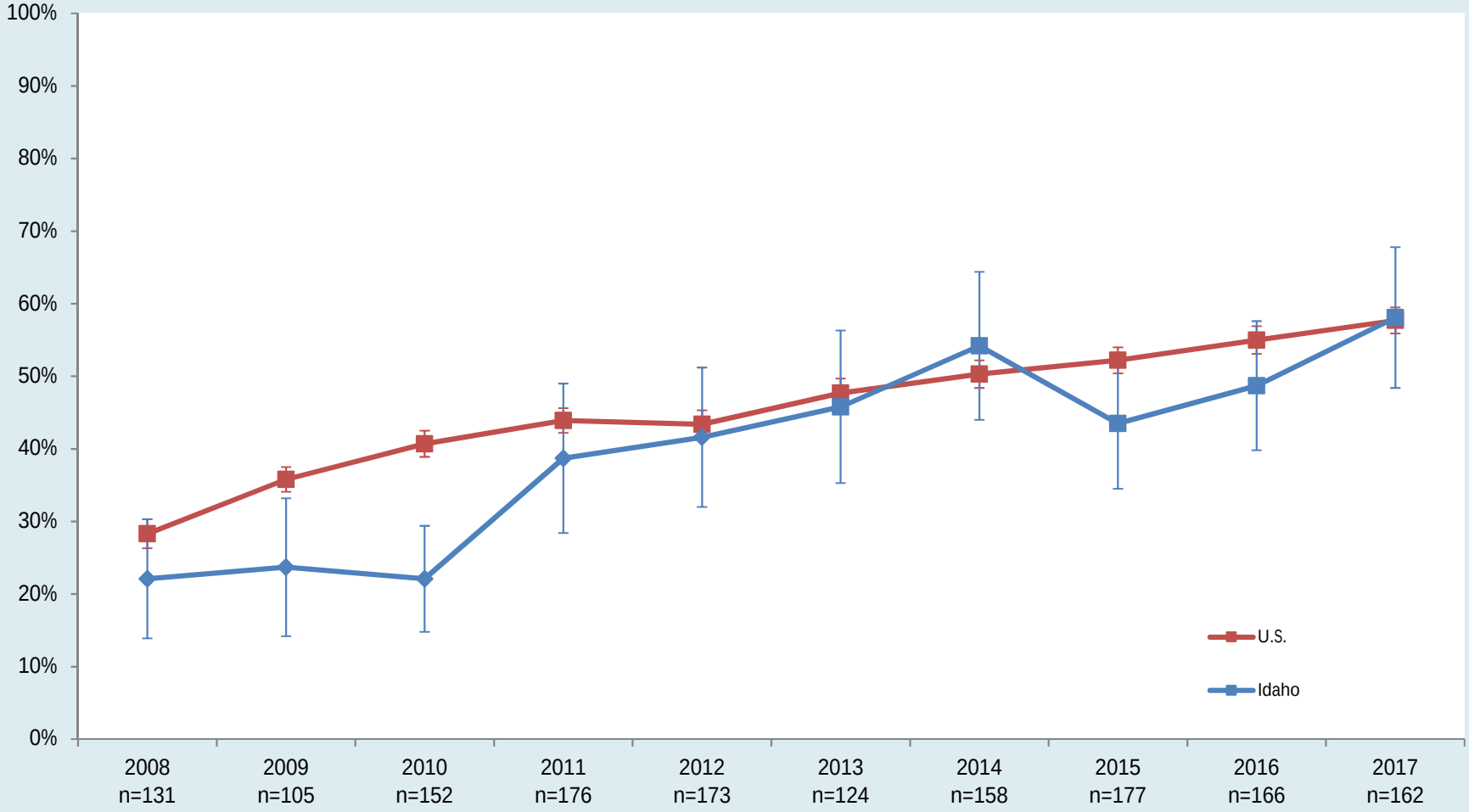
* Refers to 2 or more doses of MMR (Measles, Mumps, Rubella) vaccine

≥1 HPV* Female Vaccination Coverage 2008–2017 among adolescents 13–17 years



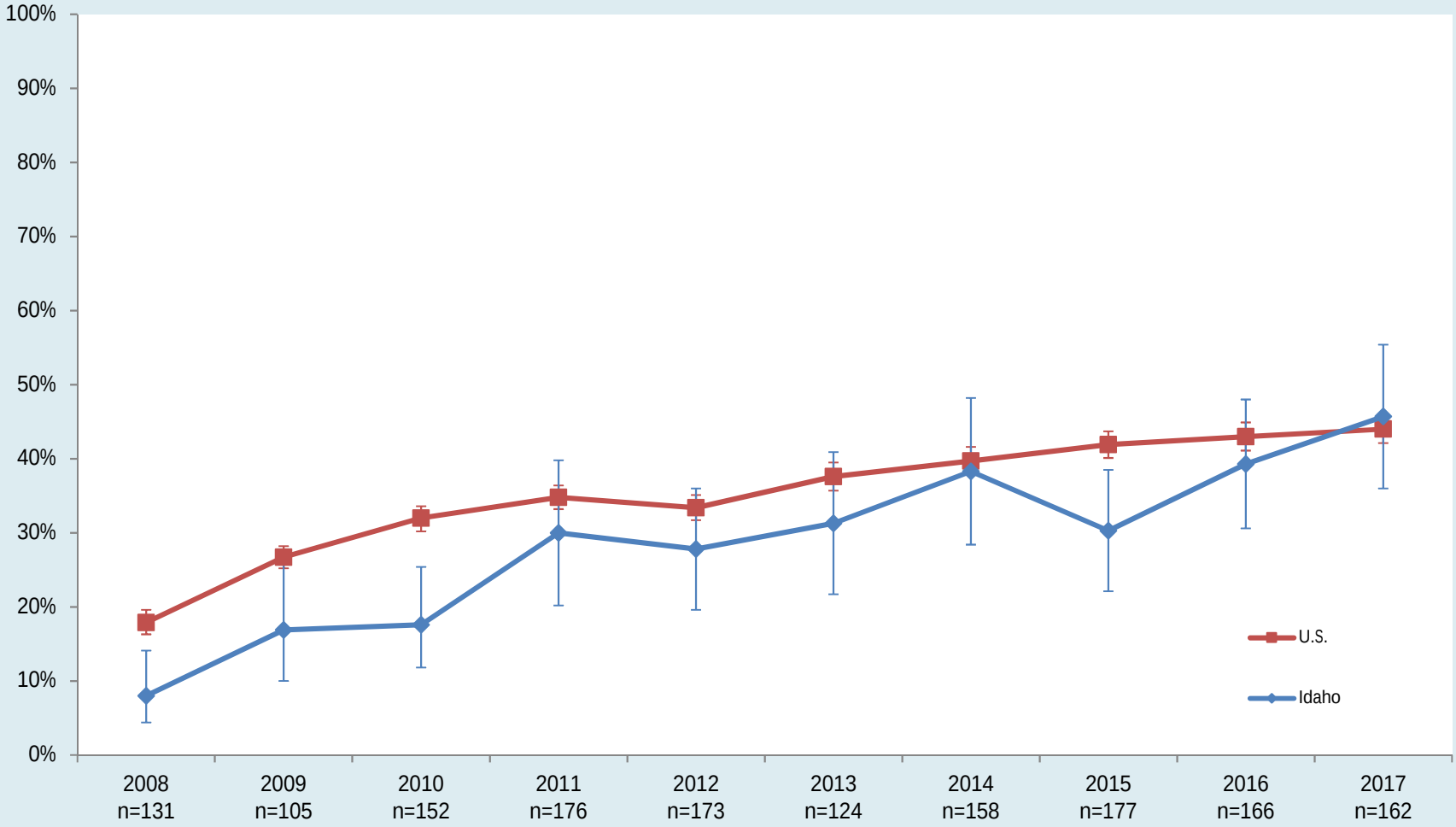
* Refers to ≥1 dose of human papillomavirus vaccine, females only

≥2 HPV* Female Vaccination Coverage 2008–2017 among adolescents 13–17 years



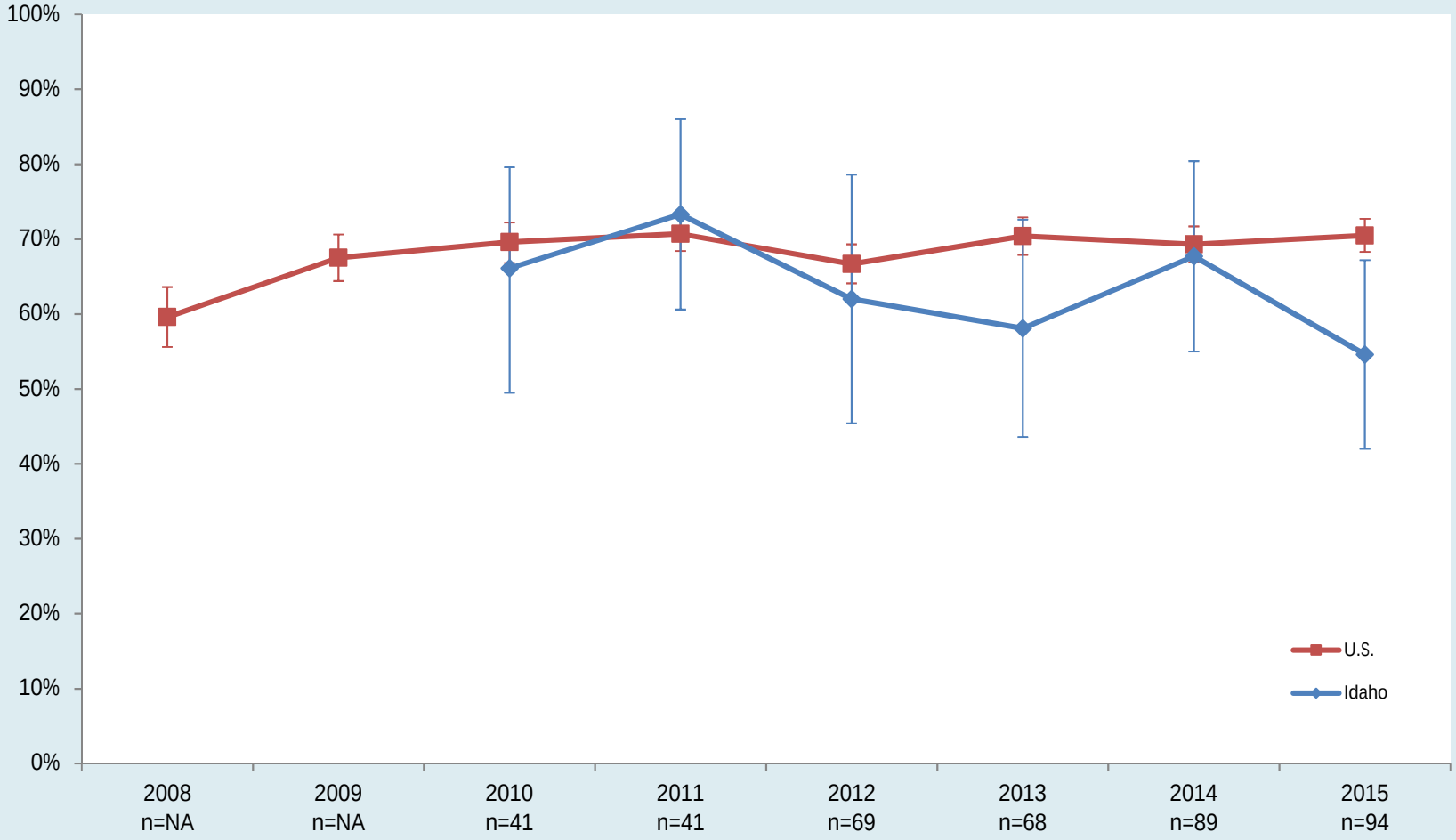
* Refers to ≥2 dose of human papillomavirus vaccine, females only

≥3 HPV* Female Vaccination Coverage 2008–2017 among adolescents 13–17 years



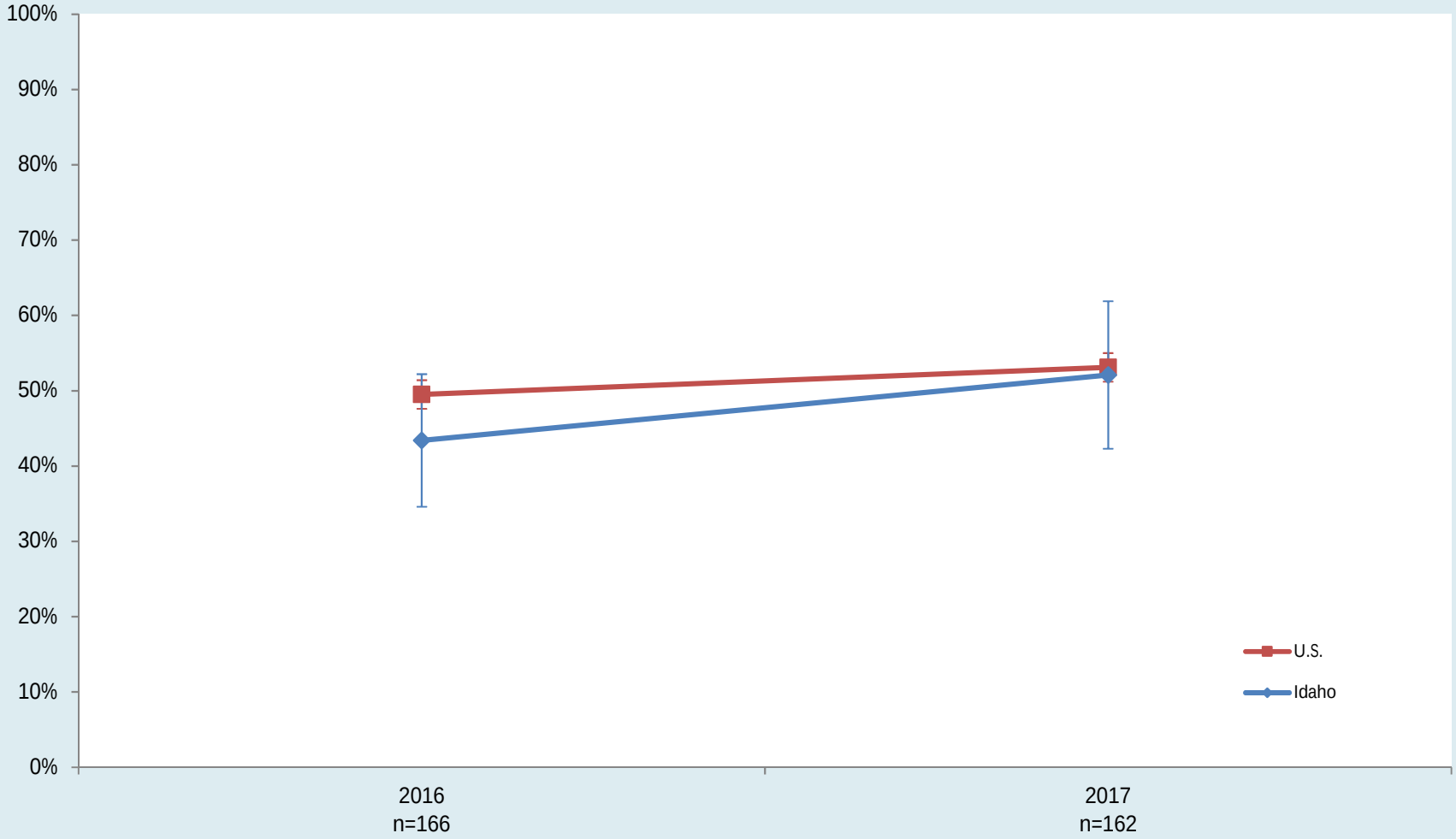
* Refers to 3 doses of human papillomavirus vaccine, females only

3-dose HPV* Female Vaccination Series Completion 2010–2015§ among adolescents 13–17 years



* Refers to percent of females who received 3 doses among those who had at least 1 dose human papillomavirus vaccine, with at least 24 weeks between the first dose and the interview date
Data collected for Idaho were insufficient to determine point estimates prior to 2010
§ This series stopped sampling in 2015
NA-Not Applicable

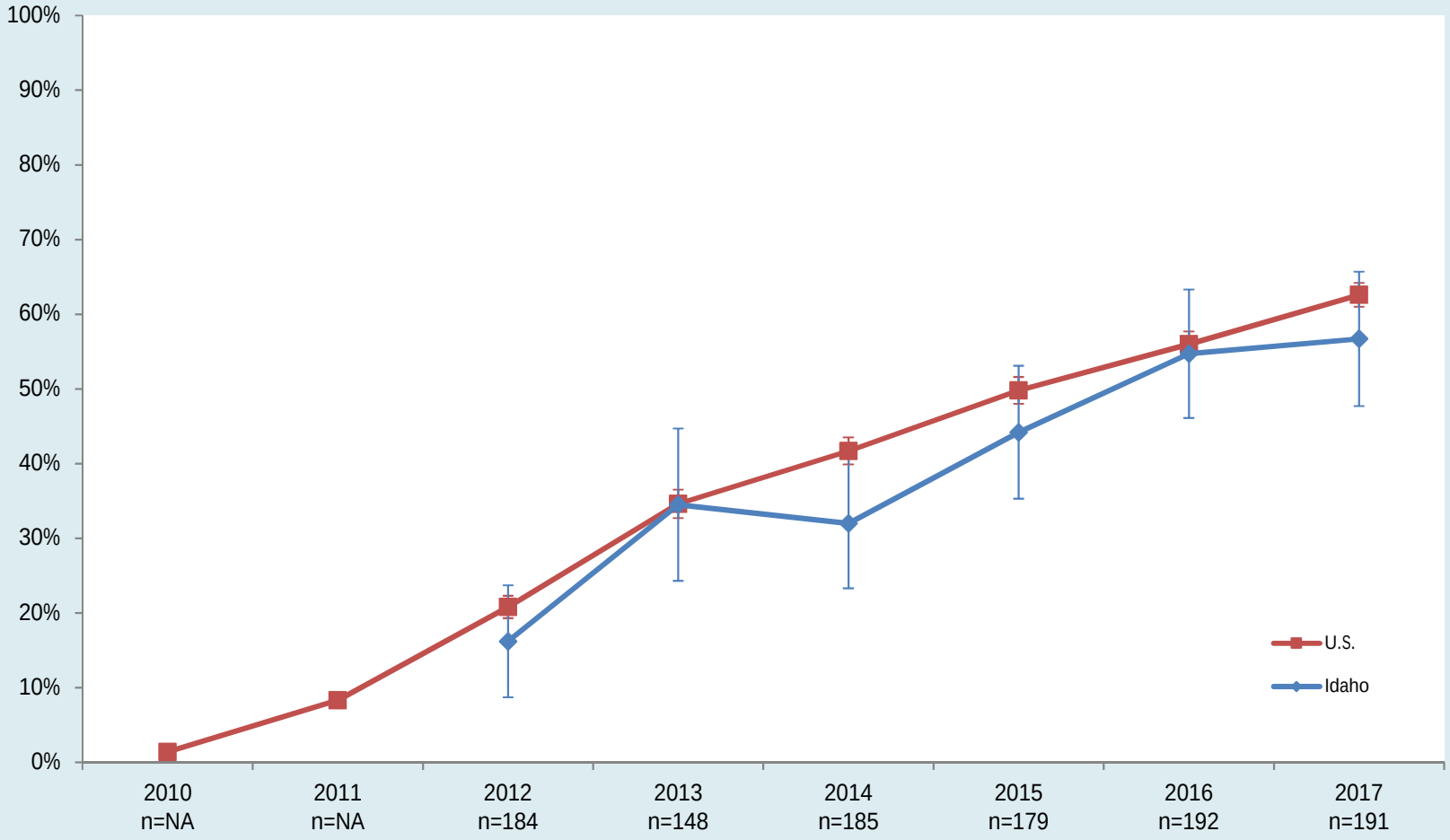
Female HPV* vaccination Up-to-Date 2016–2017§ among adolescents 13–17 years



* Refers to percent of females who completed the HPV vaccination series; either 2-doses separated by 5 months minus 4 days among immunocompetent adolescents who initiated the series before their 15th birthday or 3 doses among all others.

§ This series began sampling in 2016

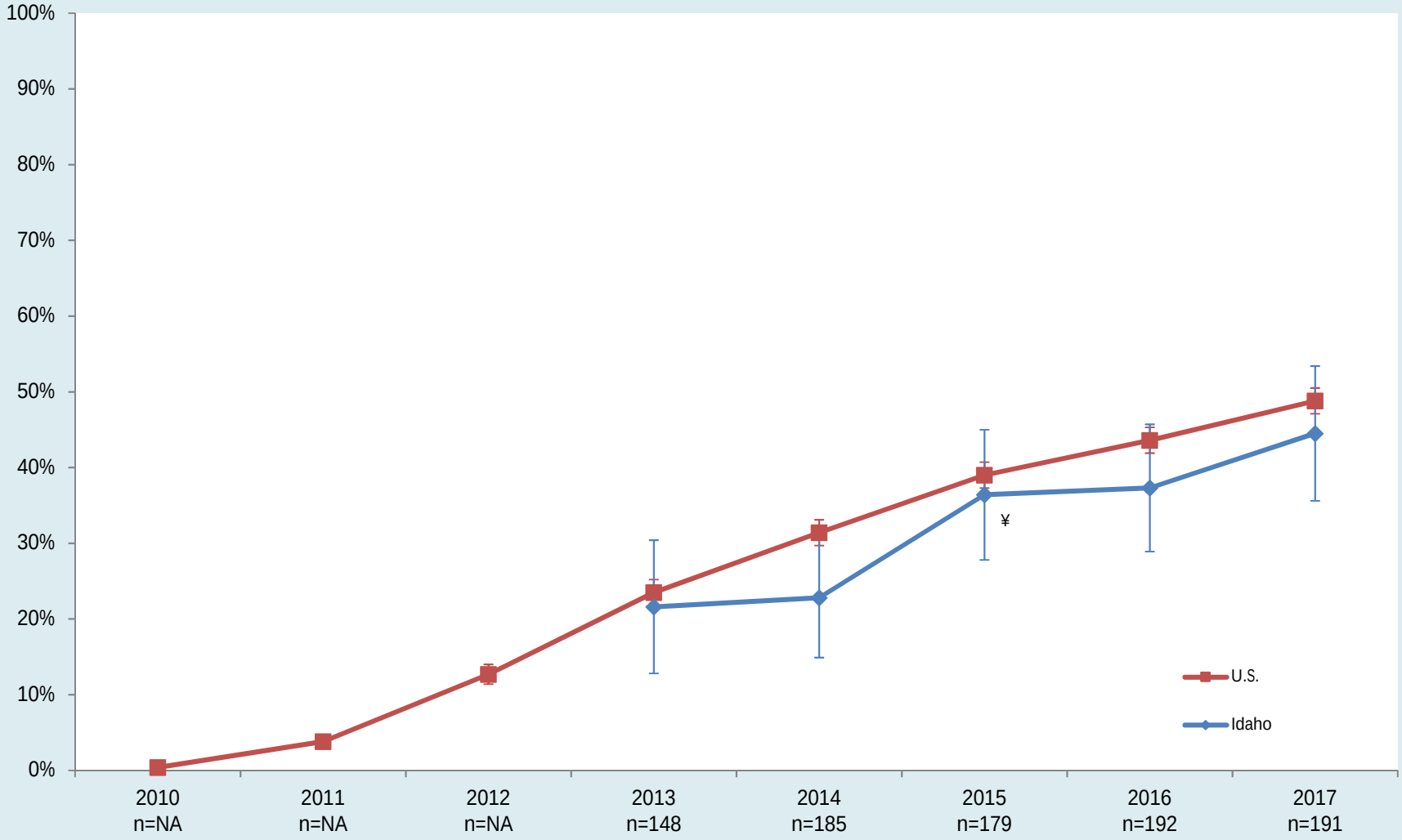
≥1 HPV* Male Vaccination Coverage 2010–2017§ among adolescents 13–17 years



* Refers to ≥1 dose of human papillomavirus vaccine, males only

§ This series began national sampling in 2010, data collected for Idaho were insufficient to determine point estimate prior to 2012

≥2 HPV* Male Vaccination Coverage 2010–2017§ among adolescents 13–17 years

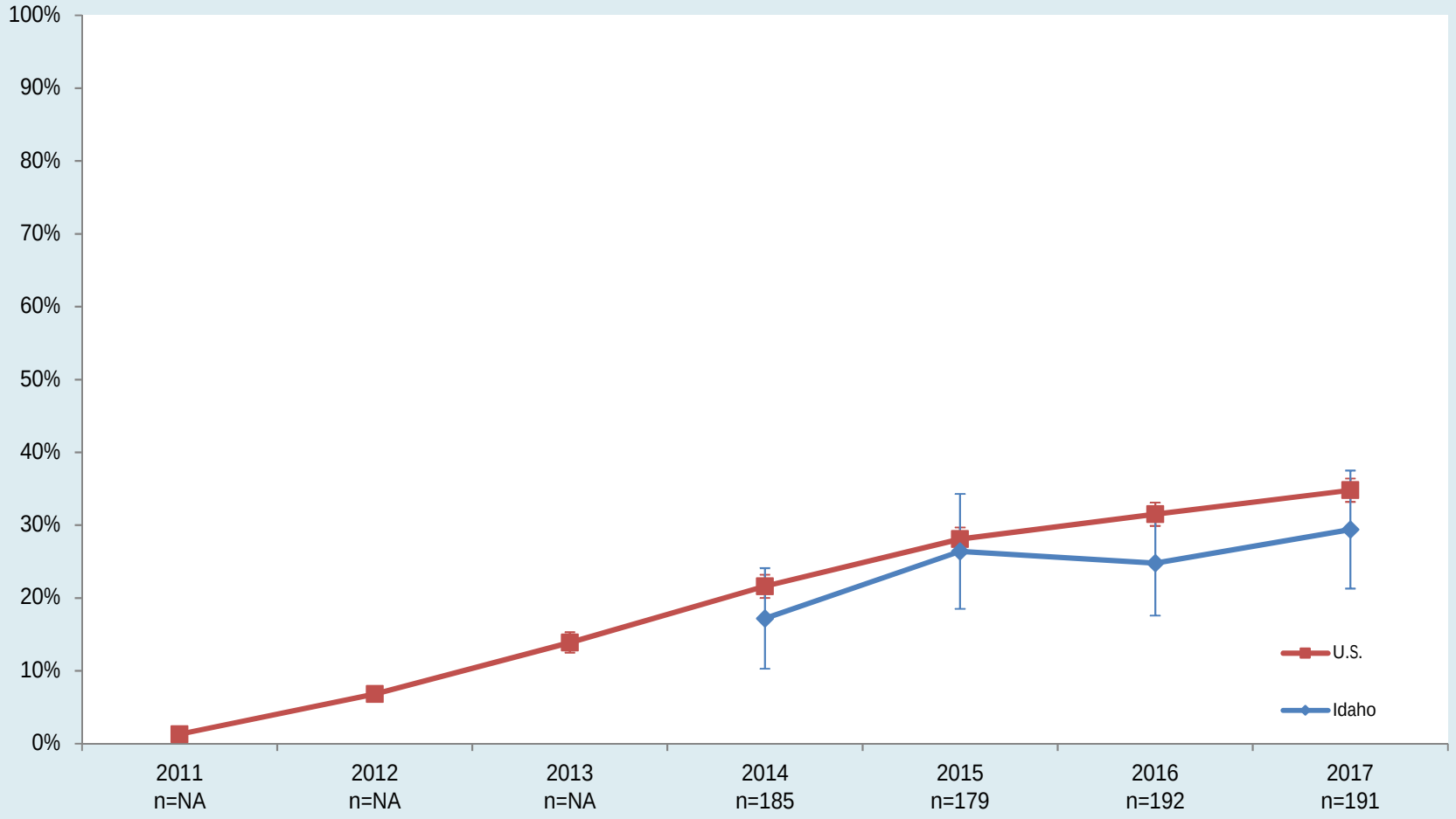


* Refers to ≥2 dose of human papillomavirus vaccine, males only

§ This series began national sampling in 2010, data collected for Idaho were insufficient to determine point estimate prior to 2012

¥ Refers to a statistically significant change compared with the previous year, p=0.05

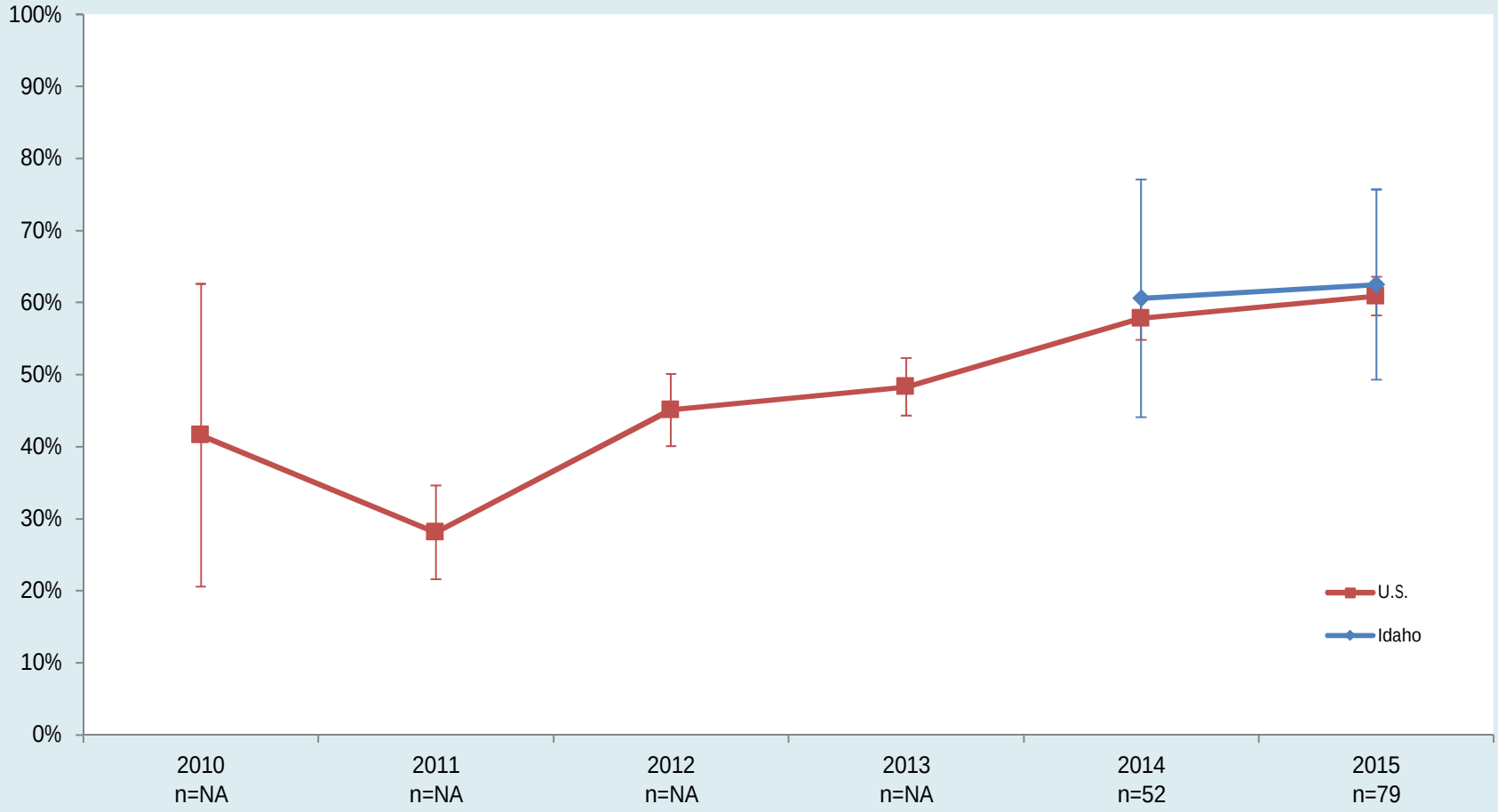
≥3 HPV* Male Vaccination Coverage 2011–2017§ among adolescents 13–17 years



* Refers to ≥3 dose of human papillomavirus vaccine, males only

§ This series began national sampling in 2011, data collected for Idaho were insufficient to determine point estimates prior to 2014

3-dose HPV* Male Vaccination Series Completion 2010–2015§ among adolescents 13–17 years

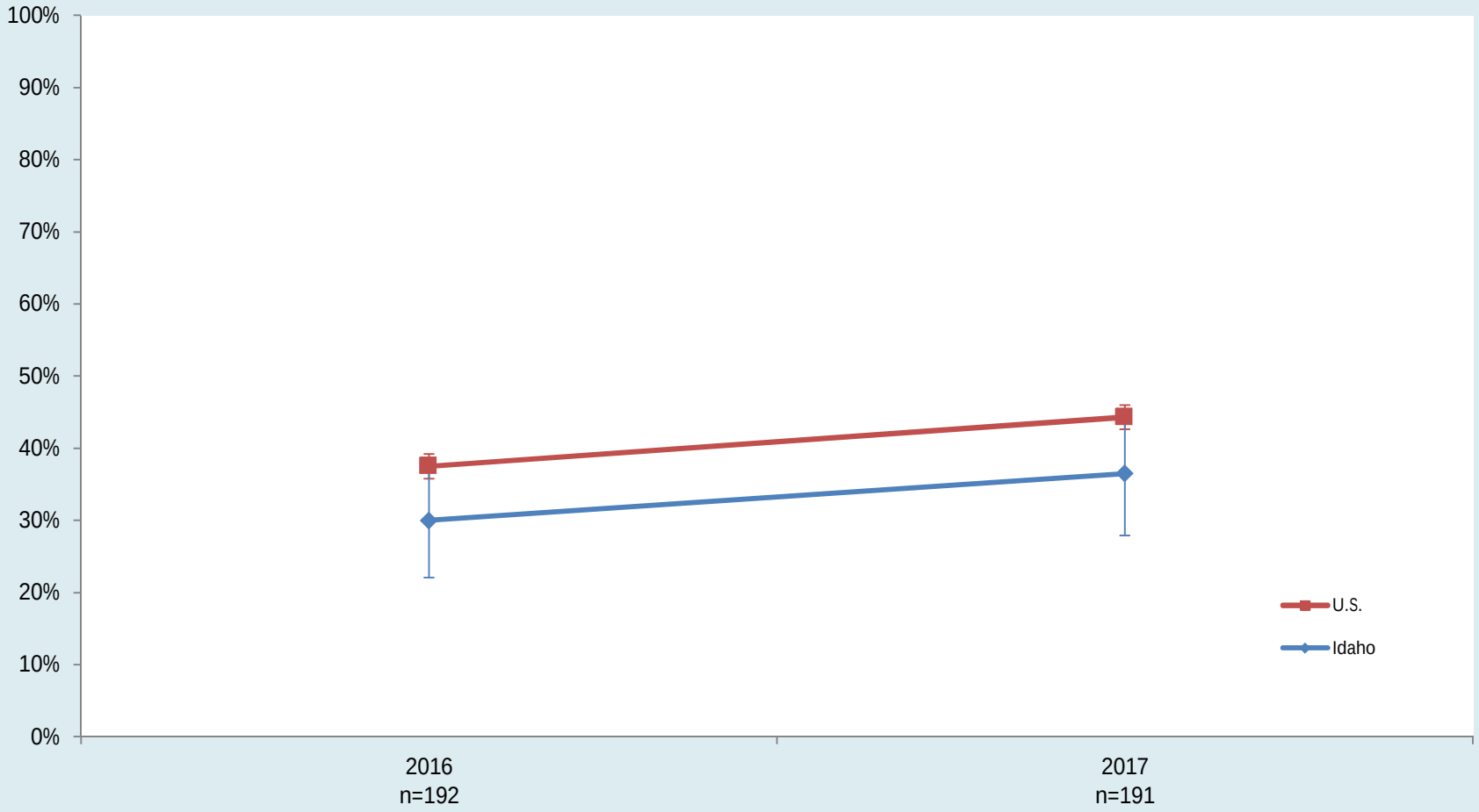


* Refers to percent of males who received 3 doses among those who had at least 1 dose human papillomavirus vaccine, with at least 24 weeks between the first dose and the interview date

§ This series sampling began in 2010 and stopped in 2015, data collected for Idaho were insufficient to determine point estimates prior to 2014

NA-Not Applicable

Male HPV* vaccination Up-to-Date 2016–2017§ among adolescents 13–17 years



* Refers to percent of males who completed the HPV vaccination series; either 2-doses separated by 5 months minus 4 days among immunocompetent adolescents who initiated the series before their 15th birthday or 3 doses among all others.

§ This series began sampling in 2016

	≥1 Td or Tdap						≥1 Tdap						≥1 MenACWY					
		CI			CI			CI			CI			CI			CI	
	U.S.	–	+	Idaho	–	+	U.S.	–	+	Idaho	–	+	U.S.	–	+	Idaho	–	+
2008 n=268	72.2	1.4	1.2	51.3	6.5	6.7	40.8	1.5	1.4	31.7	6.0	6.6	41.8	1.5	1.4	29.9	5.8	6.6
2009 n=227	76.2	1.1	1.0	61.4	7.9	7.3	55.6	1.3	1.2	38.6	7.2	7.7	53.6	1.2	1.3	34.2	6.9	7.6
2010 n=318	81.2	0.9	1.0	58.0	6.2	6.0	68.7	1.2	1.1	49.2	6.2	6.1	62.7	1.2	1.2	40.8	5.8	6.2
2011 n=385	85.3	0.8	0.8	63.3	7.0	7.0	78.2	0.9	0.9	58.3	7.1	7.1	70.5	1.0	1.0	50.5	7.2	7.2
2012 n=357	88.5	0.8	0.8	70.7	5.8	5.8	84.6	0.9	0.9	64.5	6.1	6.1	74.0	1.1	1.1	63.2	6.3	6.3
2013 n=272	89.1	0.9	0.9	82.5	5.9	5.9	86.0	0.9	0.9	74.6	6.6	6.6	77.8	1.1	1.1	71.6	7.0	7.0
2014 n=341	89.8	0.8	0.8	80.7	5.5	5.5	87.6	0.9	0.9	70.8	6.4	6.4	79.3	1.1	1.1	78.1	5.8	5.8
2015 n=356	89.6	0.8	0.8	84.3	5.0	5.0	86.4	1.0	1.0	82.5	5.2	5.2	81.3	1.0	1.0	81.4	5.2	5.2
2016 n=358	90.6	0.8	0.8	89.8	3.6	3.6	88.0	0.9	0.9	87.5	3.9	3.9	82.2	1.0	1.0	86.5	4.5	4.5
2017 n=353	90.7	0.8	0.8	90.1	4.0	4.0	88.7	0.9	0.9	87.3	4.5	4.5	85.1	0.9	0.9	90.5	4.1	4.1

	≥2 VAR					
		CI			CI	
	U.S.	–	+	Idaho	–	+
2008 n=NA	34.1	2.3	2.4			
2009 n=81	48.6	2.0	2.0	25.6	9.1	11.8
2010 n=120	58.1	1.7	1.7	42.8	9.7	10.2
2011 n=181	68.3	1.4	1.4	49.9	10.7	10.7
2012 n=195	74.9	1.4	1.4	57.0	8.7	8.7
2013 n=162	78.5	1.3	1.3	63.8	9.4	9.4
2014 n=241	81.0	1.2	1.2	66.5	7.7	7.7
2015 n=254	83.1	1.1	1.1	67.5	7.2	7.2
2016 n=290	85.6	1.0	1.0	74.9	6.1	6.1
2017 n=282	88.6	0.9	0.9	81.3	5.7	5.7

	≥2 MMR					
		CI			CI	
	U.S.	–	+	Idaho	–	+
2008 n=268	89.3	0.9	0.9	73.2	6.3	6.3
2009 n=227	89.1	0.8	0.8	83.7	6.0	6.0
2010 n=318	90.5	0.8	0.8	84.2	4.6	4.6
2011 n=385	91.1	0.7	0.7	79.9	6.3	6.3
2012 n=357	91.4	0.8	0.8	84.5	4.8	4.8
2013 n=272	91.8	0.8	0.8	85.2	5.5	5.5
2014 n=341	90.7	0.8	0.8	84.5	4.9	4.9
2015 n=356	90.7	0.8	0.8	80.4	5.1	5.1
2016 n=358	90.9	0.7	0.7	85.7	4.2	4.2
2017 n=353	92.1	0.7	0.7	87.8	4.7	4.7

	≥1 HPV vaccine (females)						≥2 HPV vaccine (females)						≥3 HPV vaccine (females)					
		CI			CI			CI			CI			CI			CI	
	U.S.	–	+	Idaho	–	+	U.S.	–	+	Idaho	–	+	U.S.	–	+	Idaho	–	+
2008 n=131	37.2	2.1	2.1	28.4	7.9	9.6	28.3	2.0	2.0	22.1	8.2	8.2	17.9	1.6	1.7	8.0	3.6	6.1
2009 n=105	44.3	1.9	1.8	30.2	9.2	11.2	35.8	1.7	1.7	23.7	9.5	9.5	26.7	1.5	1.5	16.9	6.9	10.3
2010 n=152	48.7	1.8	1.8	28.8	7.2	8.5	40.7	1.8	1.8	22.1	7.3	7.3	32.0	1.8	1.6	17.6	5.8	7.8
2011 n=176	53.0	1.7	1.7	45.5	10.5	10.5	43.9	1.7	1.7	38.7	10.3	10.3	34.8	1.6	1.6	30.0	9.8	9.8
2012 n=173	53.8	1.9	1.9	51.3	9.5	9.5	43.4	1.9	1.9	41.6	9.6	9.6	33.4	1.7	1.7	27.8	8.2	8.2
2013 n=124	57.3	1.9	1.9	55.0	10.6	10.6	47.7	2.0	2.0	45.8	10.5	10.5	37.6	1.9	1.9	31.3	9.6	9.6
2014 n=158	60.0	1.9	1.9	59.4	10.2	10.2	50.3	1.9	1.9	54.2	10.2	10.2	39.7	1.9	1.9	38.3	9.9	9.9
2015 n=177	62.8	1.8	1.8	57.3	8.9	8.9	52.2	1.8	1.8	43.5	9.0	9.0	41.9	1.8	1.8	30.3	8.2	8.2
2016 n=166	65.1	1.7	1.7	59.8	8.9	8.9	55.0	1.9	1.9	48.7	8.9	8.9	43.0	1.9	1.9	39.3	8.7	8.7
2017 n=162	68.6	1.7	1.7	68.4	9.2	9.2	57.7	1.8	1.8	58.1	9.7	9.7	44.0	1.9	1.9	45.7	9.7	9.7

National Immunization Survey–Teen Data for United States and Idaho
among adolescents 13–17 years 2008 through 2017

≥1 HPV vaccine (males)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA						
2009 n=NA						
2010 n=NA	1.4	0.4	0.4			
2011 n=NA	8.3	1.0	1.0			
2012 n=184	20.8	1.5	1.5	16.2	7.5	7.5
2013 n=148	34.6	1.9	1.9	34.5	10.2	10.2
2014 n=185	41.7	1.8	1.8	32.0	8.7	8.7
2015 n=179	49.8	1.8	1.8	44.2	8.9	8.9
2016 n=192	56.0	1.7	1.7	54.7	8.6	8.6
2017 n=191	62.6	1.6	1.6	56.7	9.0	9.0

≥2 HPV vaccine (males)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA						
2009 n=NA						
2010 n=NA	0.4	0.2	0.2			
2011 n=NA	3.8	0.7	0.7			
2012 n=NA	12.7	1.3	1.3			
2013 n=148	23.5	1.7	1.7	21.6	8.8	8.8
2014 n=185	31.4	1.7	1.7	22.8	7.9	7.9
2015 n=179	39.0	1.7	1.7	36.4	8.6	8.6
2016 n=192	43.6	1.7	1.7	37.3	8.4	8.4
2017 n=191	48.8	1.7	1.7	44.5	8.9	8.9

≥3 HPV vaccine (males)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA						
2009 n=NA						
2010 n=NA						
2011 n=NA	1.3	0.3	0.3			
2012 n=NA	6.8	1.0	1.0			
2013 n=NA	13.9	1.4	1.4			
2014 n=185	21.6	1.6	1.6	17.2	6.9	6.9
2015 n=179	28.1	1.6	1.6	26.4	7.9	7.9
2016 n=192	31.5	1.6	1.6	24.8	7.2	7.2
2017 n=191	34.8	1.6	1.6	29.4	8.1	8.1

3-dose HPV vaccination series completion (females)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA	59.6	4.0	4.0			
2009 n=NA	67.5	3.1	3.1			
2010 n=41	69.6	2.8	2.6	66.1	16.6	13.5
2011 n=41	70.7	2.3	2.3	73.3	12.7	12.7
2012 n=69	66.7	2.6	2.6	62.0	16.6	16.6
2013 n=68	70.4	2.5	2.5	58.1	14.5	14.5
2014 n=89	69.3	2.4	2.4	67.7	12.7	12.7
2015 n=94	70.5	2.2	2.2	54.6	12.6	12.6
2016 n=NA						
2017 n=NA						

3-dose HPV vaccination series completion (males)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA						
2009 n=NA						
2010 n=NA	41.6	21.0	21.0			
2011 n=NA	28.1	6.5	6.5			
2012 n=NA	45.1	5.0	5.0			
2013 n=NA	48.3	4.0	4.0			
2014 n=52	57.8	3.0	3.0	60.6	16.5	16.5
2015 n=79	60.9	2.7	2.7	62.5	13.2	13.2
2016 n=NA						
2017 n=NA						

HPV vaccination Up-to-Date (females)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA						
2009 n=NA						
2010 n=NA						
2011 n=NA						
2012 n=NA						
2013 n=NA						
2014 n=NA						
2015 n=NA						
2016 n=166	49.5	1.9	1.9	43.4	8.8	8.8
2017 n=162	53.1	1.9	1.9	52.1	9.8	9.8

HPV vaccination Up-to-Date (males)

	U.S.	CI –	CI +	Idaho	CI –	CI +
2008 n=NA						
2009 n=NA						
2010 n=NA						
2011 n=NA						
2012 n=NA						
2013 n=NA						
2014 n=NA						
2015 n=NA						
2016 n=192	37.5	1.7	1.7	30.0	7.9	7.9
2017 n=191	44.3	1.7	1.7	36.5	8.6	8.6

Idaho data points in BOLD indicate a statistically significant change compared with the previous year, p=0.05
Blue cells indicate NIS did not collect data during that year
Brown cells indicate data collected for Idaho was insufficient to determine point estimate
CI = Confidence Interval
2013 data were revised by NIS in 2014 to have a more inclusive definition of adequate provider data
NA=Not Applicable

Glossary of Abbreviations and Terms

HPV	Human papillomavirus vaccine
MenACWY	Meningococcal conjugate vaccine or meningococcal vaccine of unknown type
MMR	MMR (Measles, Mumps, Rubella) vaccine
NIS	National Immunization Survey
Td	Tetanus toxoid-diphtheria vaccine
Tdap	Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis
VAR	Varicella vaccine
Healthy People 2020	Healthly People 2020 objectives refer to adolescents aged 13 - 15 years of age