



Anencephaly Investigation

Central Washington, 2010-2016

Advisory Committee Meeting
August 13, 2015

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HEALTHIER COMMUNITY



Surveillance Update

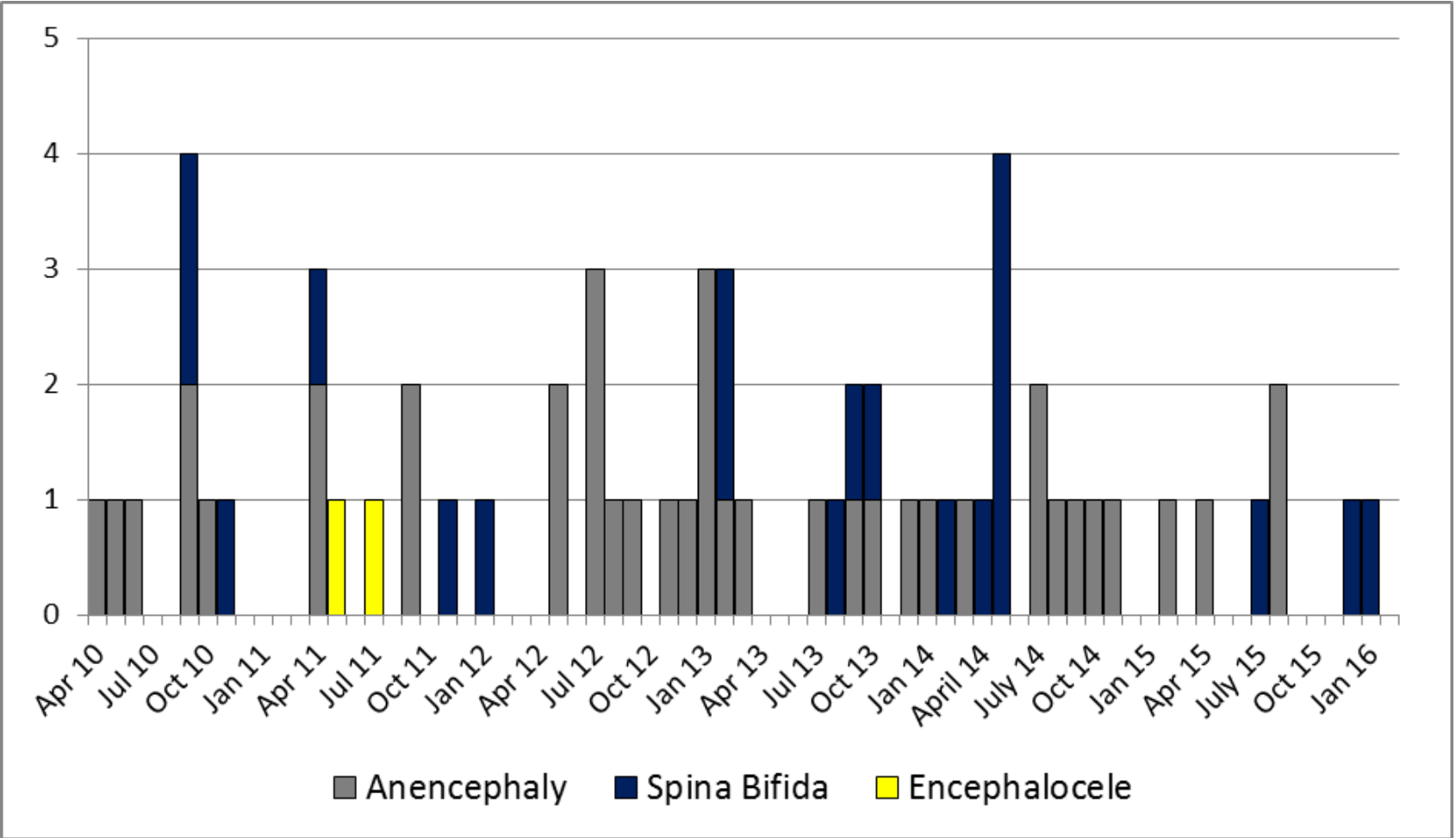
Neural Tube Defects by Year of Delivery or Estimated Year of Delivery¹

	Number	Total births	Rate per 10,000 births	95% CI
All Neural Tube Defects				
2010	9	8565	10.5	(4.8, 19.9)
2011	8	8528	9.4	(4.0, 18.5)
2012	10	8352	12.0	(5.7, 22.0)
2013	14	8084	17.3	(9.5, 29.1)
2014	14	8432	16.6	(9.1, 27.9)
2015	6	na		
2016	1	na		
Total to date ²	62	na		
Anencephaly				
2010	6	8565	7.0	(2.6, 15.2)
2011	4	8528	4.7	(1.3, 12.0)
2012	9	8352	10.8	(4.9, 20.5)
2013	9	8084	11.1	(5.1, 21.1)
2014	8	8432	9.5	(4.1, 18.7)
2015	4	na		
2016	0	na		
Total to date ²	40	na		

¹Estimated year of delivery is used for cases terminated or delivered before 37 weeks gestation.

²Total to date reflects cases confirmed by August 7, 2015 with a delivery or estimated date of delivery in 2010-2016.

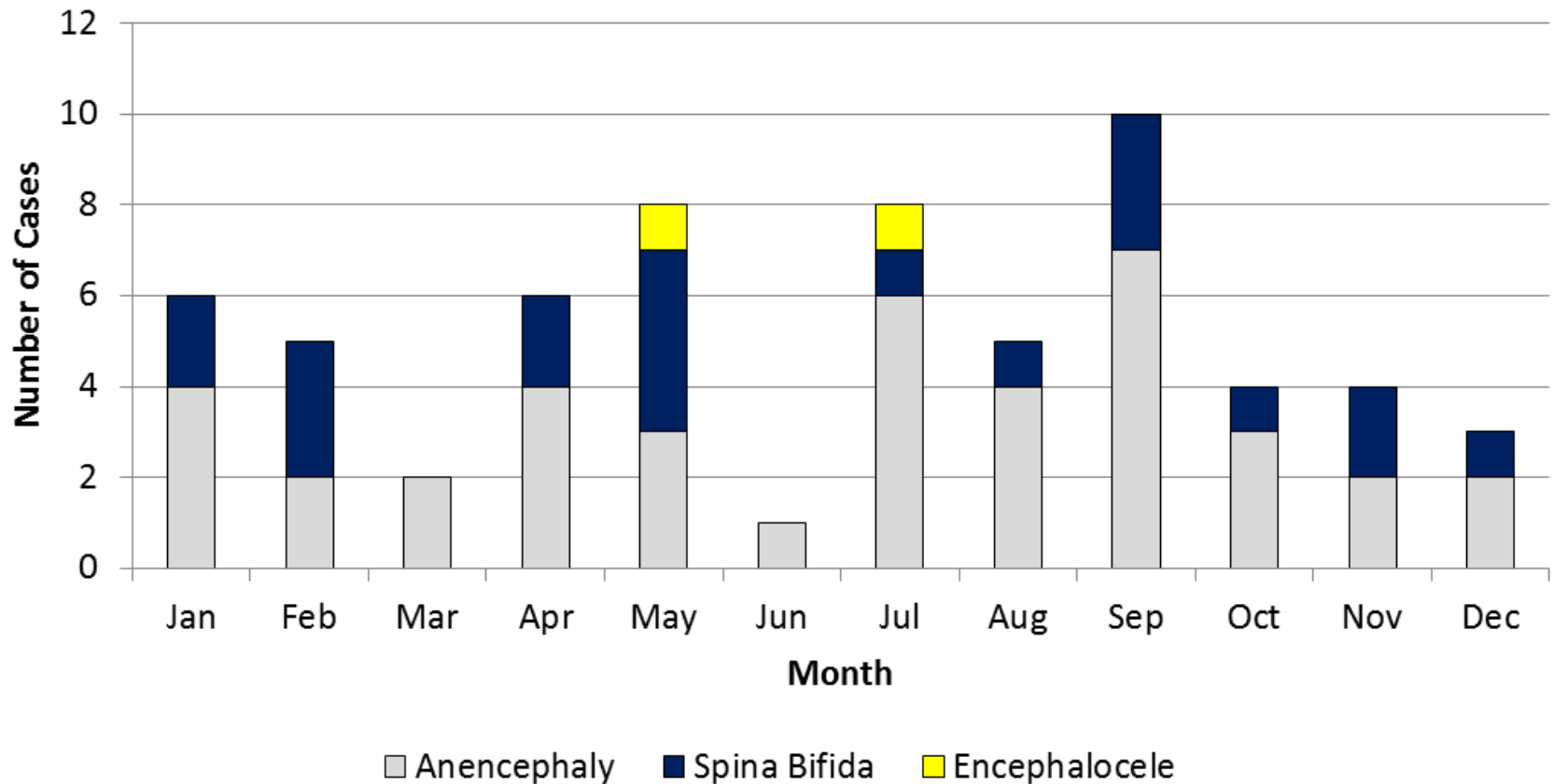
Neural Tube Defects by Month of Estimated Delivery Date¹



¹Estimated delivery date uses delivery date for gestational age ≥ 37 weeks and estimated delivery date for gestational age <37 weeks at delivery. Cases were confirmed through August 7, 2015.



Neural Tube Defects by Month of Estimated Delivery Date 2010-2016 Combined¹



¹Estimated delivery date uses delivery date for gestational age ≥ 37 weeks and estimated delivery date for gestational age < 37 weeks at delivery. Cases were confirmed through August 7, 2015.

Washington Rates of Anencephaly and Spina Bifida¹

	Anencephaly	Rate per 10,000	All Neural Tube Defects	Rate per 10,000	Births
2005	18	2.2	39	4.7	82,625
2006	13	1.5	45	5.2	86,845
2007	21	2.4	55	6.2	88,921
2008	24	2.7	59	6.5	90,270
2009	25	2.8	55	6.2	89,242
2010	27	3.1	53	6.1	86,480
2011	35	4.0	64	7.4	86,929
2012	23	2.6	49	5.6	87,417
2013	23	2.7	49	5.7	86,566
2014 ²	24	2.7	47	5.3	88,561
2015 ^{2,3}	15	3.0	27	5.5	49,299
2005-2015	248	2.7	542	5.9	923,155

¹Based on ascertainment from birth certificates, fetal death certificates and hospital discharge data, 2005-2013.

²Based on ascertainment from birth certificates and fetal death certificates only, 2014 and 2015.

³Limited to first 6 months of year using preliminary data file.

Interview Update

Preliminary Summary of Interviews

- 15 completed interviews
- Information based on manual review of questionnaires. More systematic review of coded data forthcoming
- Mean age of mothers was 29.6 years old
- 14 of the mothers had prior pregnancies, 11 livebirths.
- Mean BMI was 24.1; 4 women BMI > 30

Preliminary Summary of Interviews

- 7 women reported pesticide exposure of any type
- 13 women were on public water supply
- 8 women reported folic acid use 3 or more months prior to their pregnancy
- 5 mothers reported agricultural occupations
 - 3 mother and father both work in agriculture-related occupation
 - 1 mother only worked in agriculture related occupation
 - 1 father only worked in agriculture related occupation

Preliminary Summary of Interviews

- 2 mothers had history of prior NTD affected pregnancy
- Variety of medical history and both over the counter and prescription drug use reported

Prevention Update

Prevention Update

- Finalized Folic Acid fact sheet for providers and Community Health Workers
- Disseminating Folic Acid fact sheet and other provider materials to contacts in 3 county area
- Developing an updated communication and dissemination plan
- Yakima Health District continues to work with Vitamin Angels for distribution of free vitamins. Logistics continue to be challenging.

Proposed Next Steps

- Continue stimulated passive surveillance from hospitals/providers in 3 county area
- Continue statewide passive surveillance using linked file and vital statistics files
- Interview all newly identified case mothers. Begin efforts to locate mothers as soon as learn of new case.
- Conduct in-depth, systematic review of case data with CDC to explore exposures of interest common to mothers
- Continue dissemination of materials and public messaging

To provide comments or questions,
please contact:

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