



PUBLIC HEALTH

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HEALTHIER WASHINGTON**

Pertussis Update

10th Annual Cross Border Public Health Preparedness Workshop
May 1, 2013

Chas DeBolt

Background

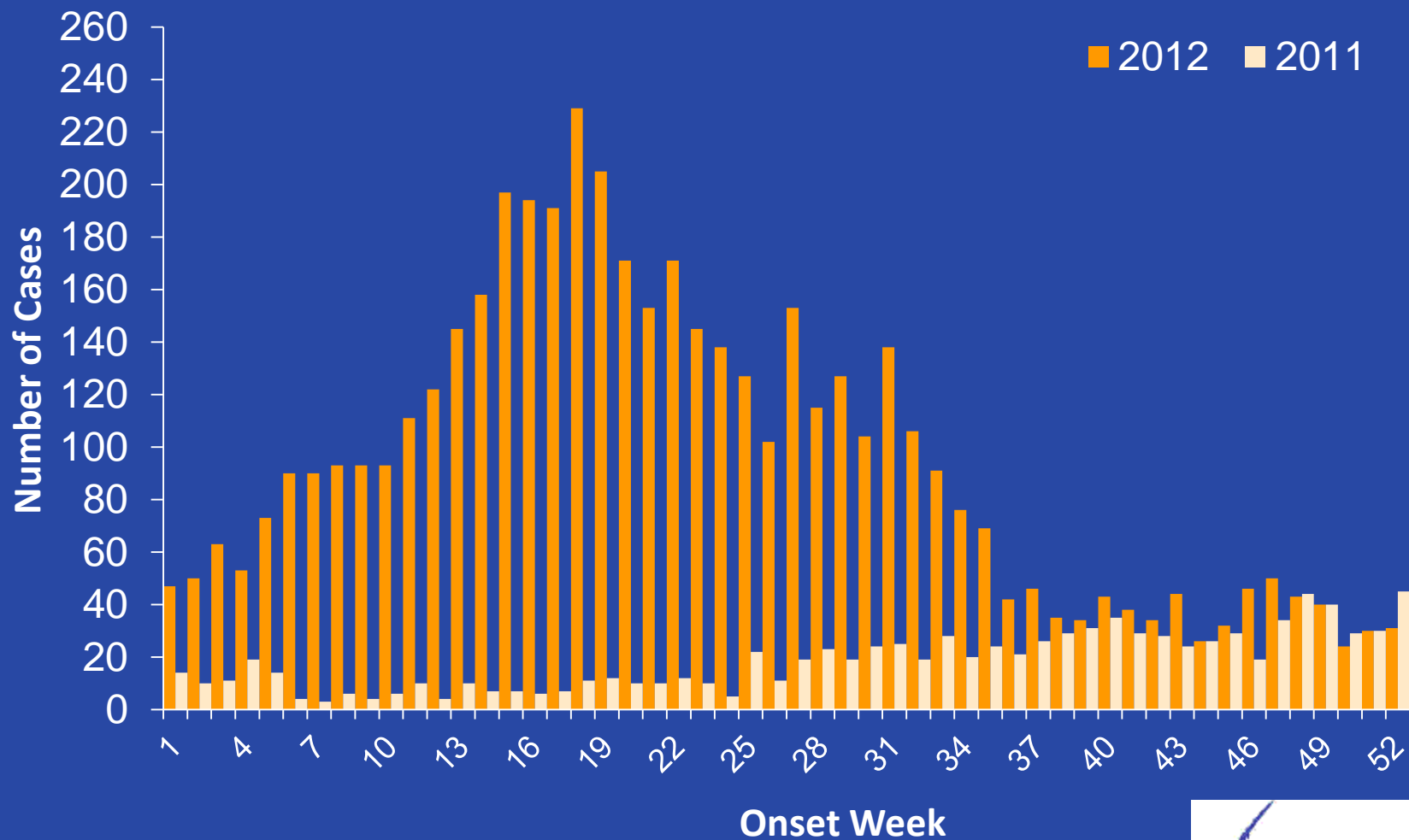
- 3rd Quarter of 2011 increase
- Snohomish County
 - Highest number of cases at the time
 - Infant death in August 2011
- February 2012 - DOH Epi alerted others in DOH
- March - Pertussis Workgroup formed within DOH
- LHJs reporting infrastructure burden to DOH Epi
- April 3 - Secretary of Health declared an epidemic

Epi response

- April 9th –DOH Epi held pertussis meeting with LHJs to discuss controversial pertussis control issues
- Initiated revision of DOH pertussis guidelines
- May 9th – Held teleconference for all 35 LHJ's
- Letter to all WA providers from State Health Officer

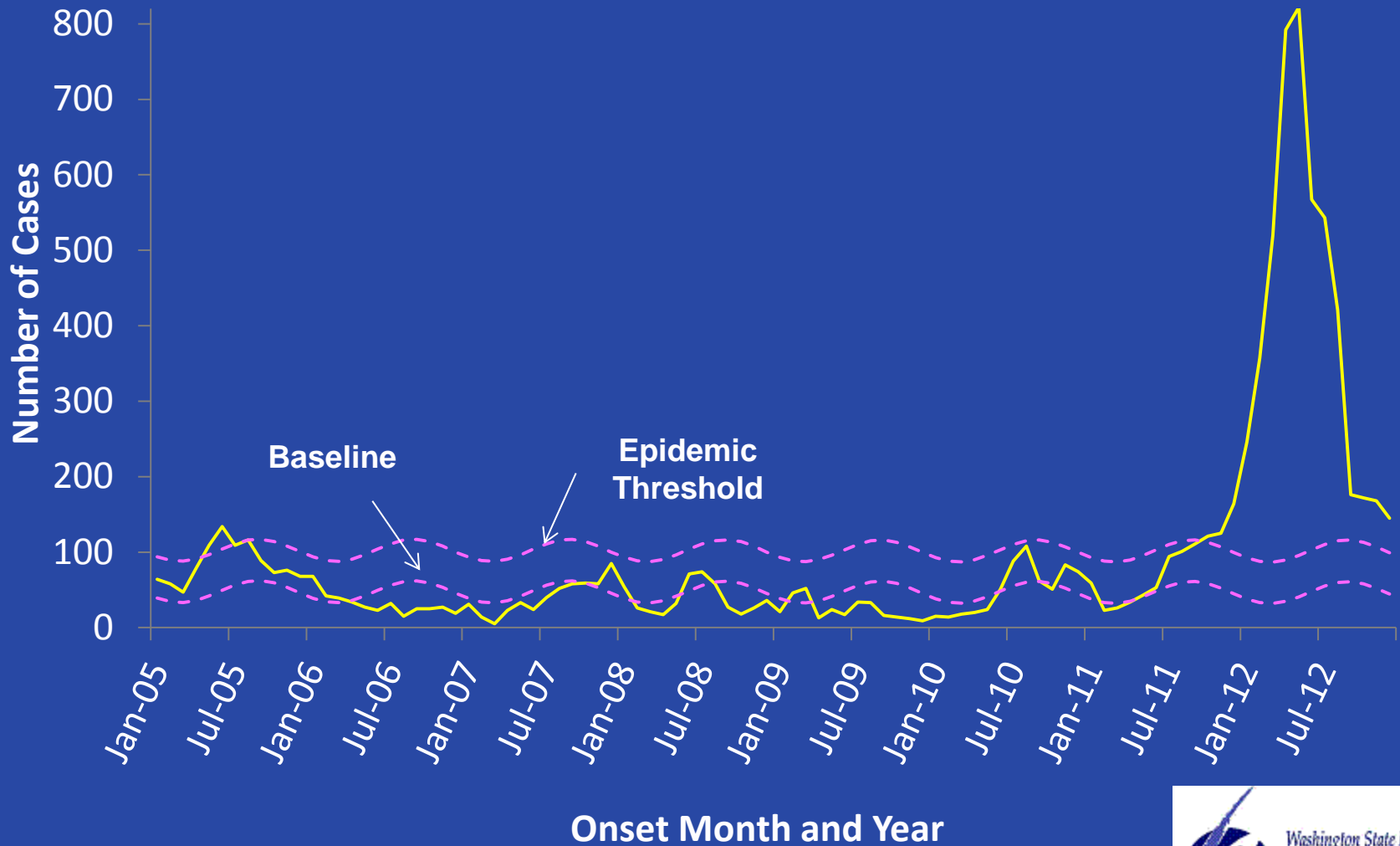
Pertussis Cases by Onset Week

2011 versus 2012



Pertussis Cases by Onset Month

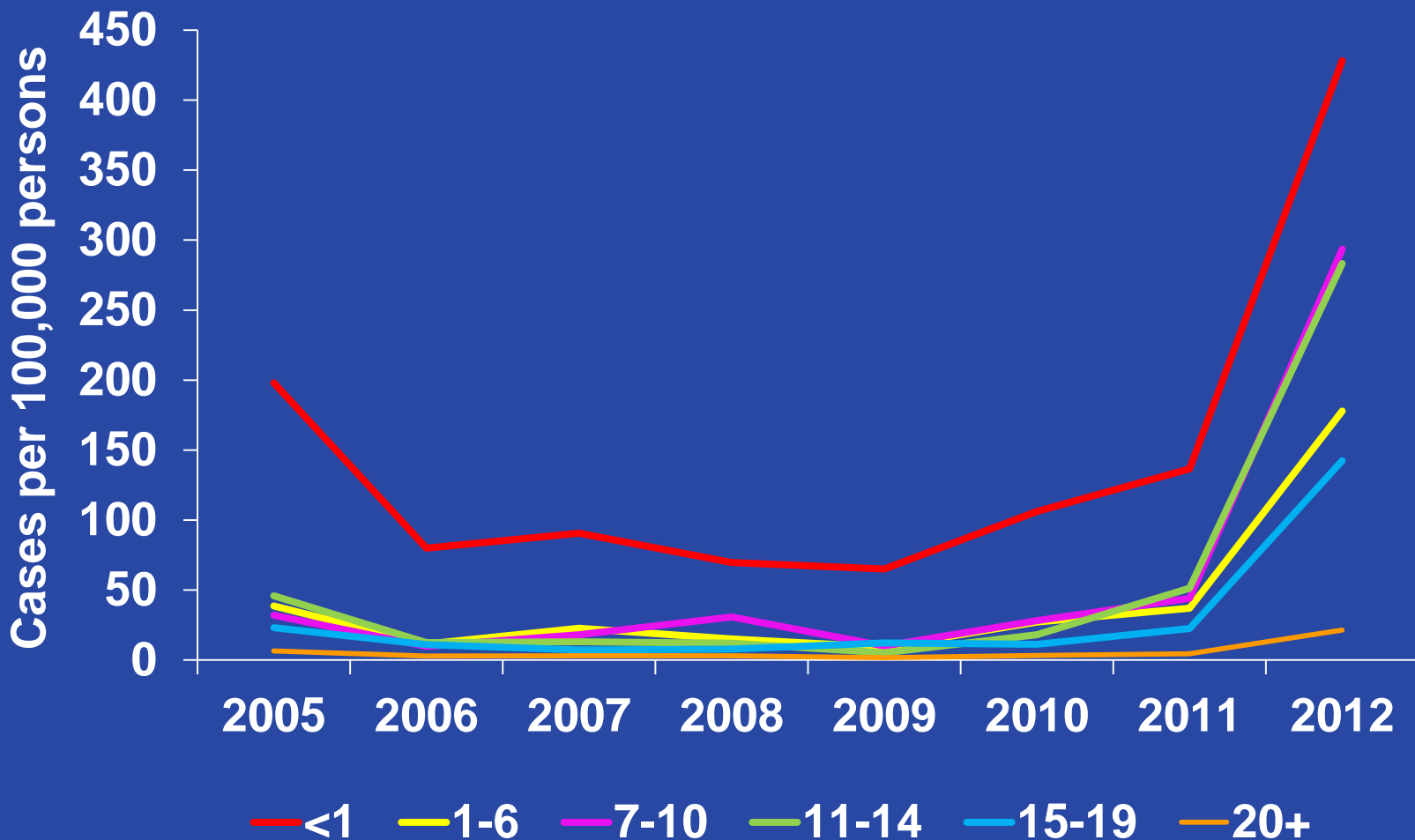
2005–2012



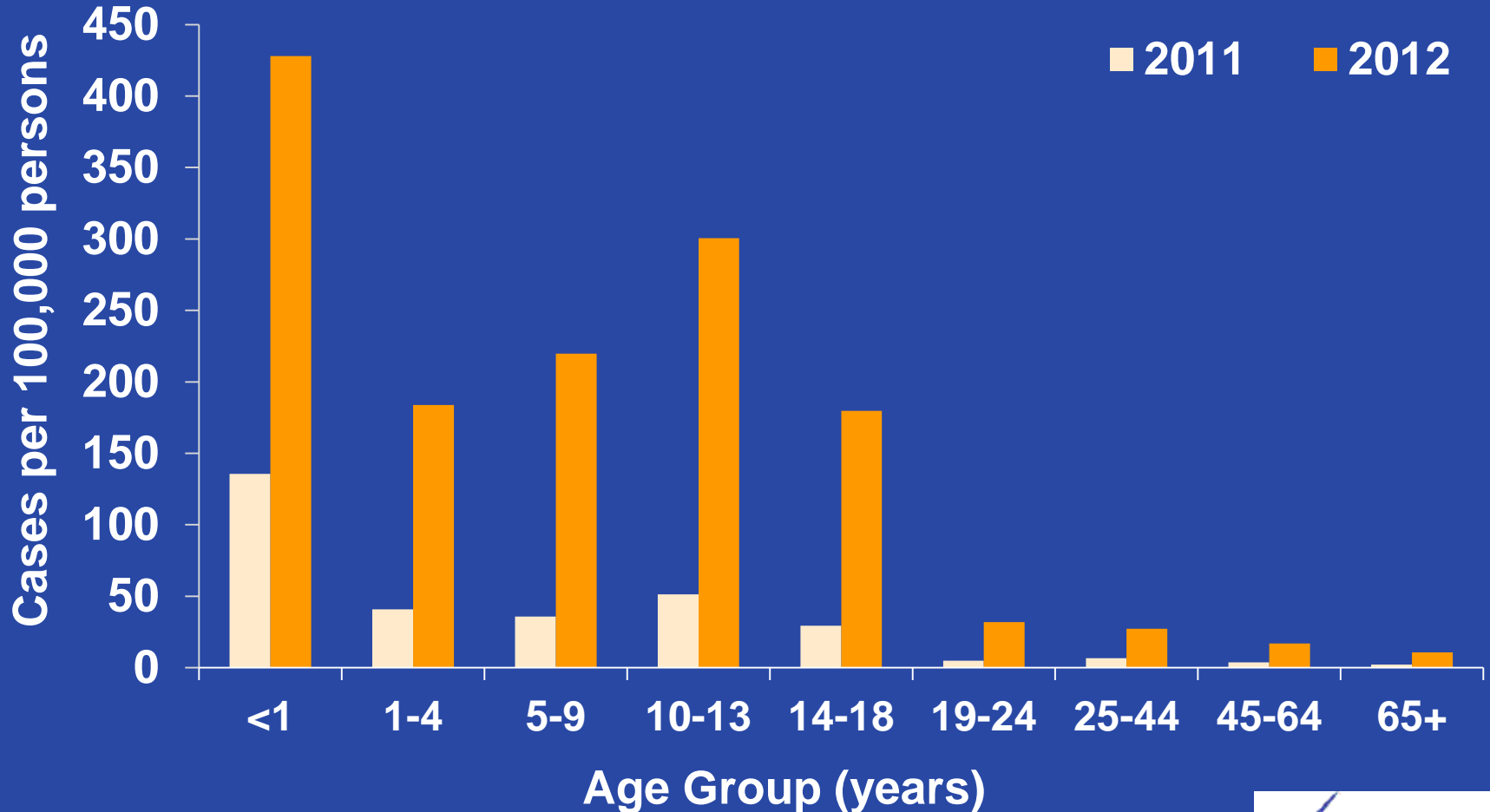
Pertussis Reports by Case Classification 2007 to 2012

Onset Year	All reports	Cases Reported to CDC (Confirmed & Probable)	PCR+ Suspect Cases	Total Cases if PCR+ Suspect Cases were Included
2007	510	482	13	495
2008	502	461	19	480
2009	342	291	18	309
2010	682	608	32	640
2011	1,080	965	68	1,023
2012	5,864	4,921	605	5,526

Pertussis Rates by Age Group 2005-2012



Pertussis Incidence by Age Group 2011 versus 2012

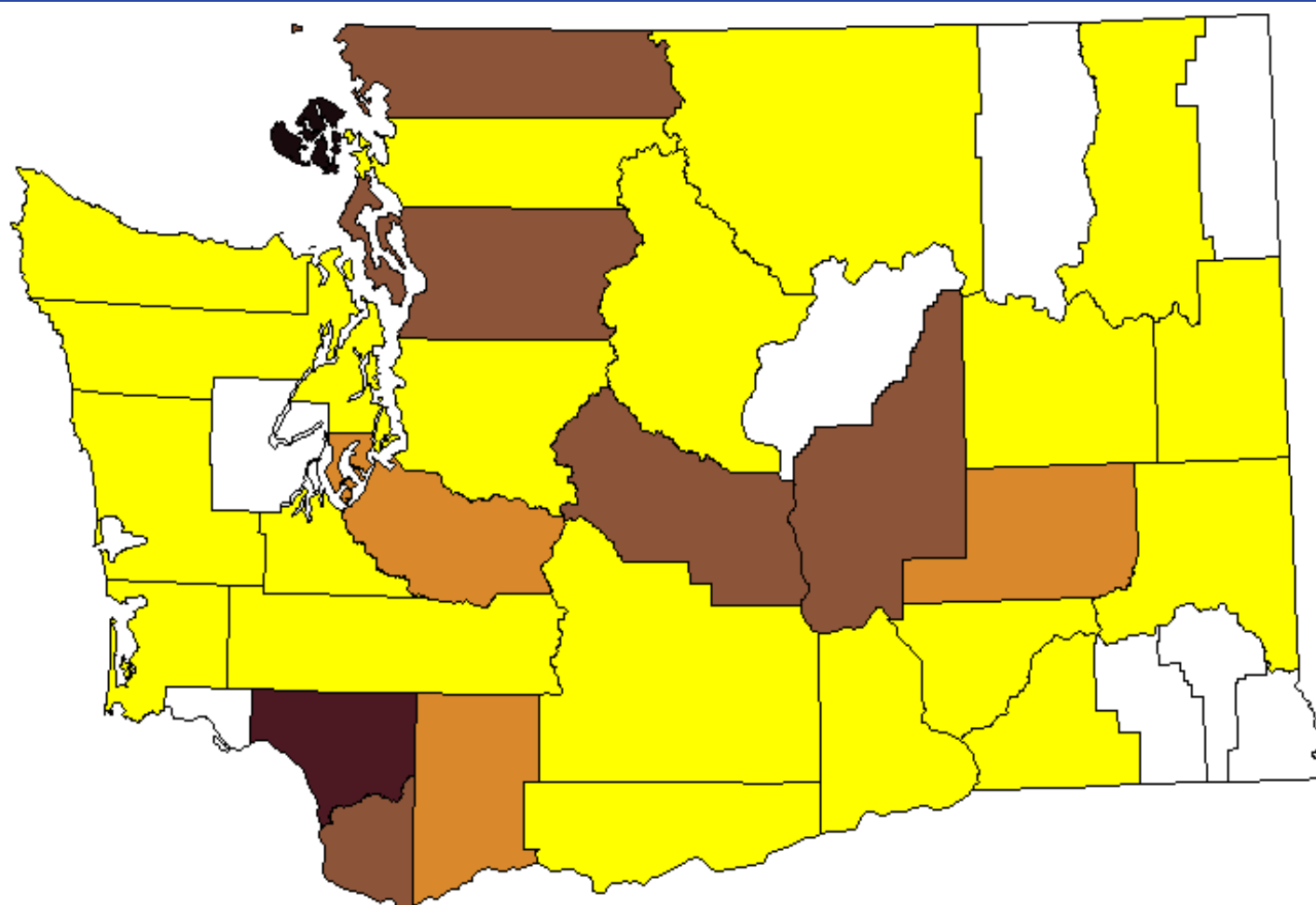


Pertussis Cases by Age Group

2012

Age Group (years)	2010 OFM Population	Number of Cases	Rate per 100,000 persons	Percent by Age Group
<1	88,544	379	428.0	7.7
1-4	355,275	653	183.8	13.3
5-9	432,656	951	219.8	19.3
10-13	346,396	1041	300.5	21.2
14-18	454,703	817	179.7	16.6
19-24	577,706	184	31.9	3.7
25-44	1,830,703	499	27.3	10.1
45-64	1,823,910	309	16.9	6.3
65+	823,357	87	10.6	1.8
All ages	6,733,250	4,921	73.1	

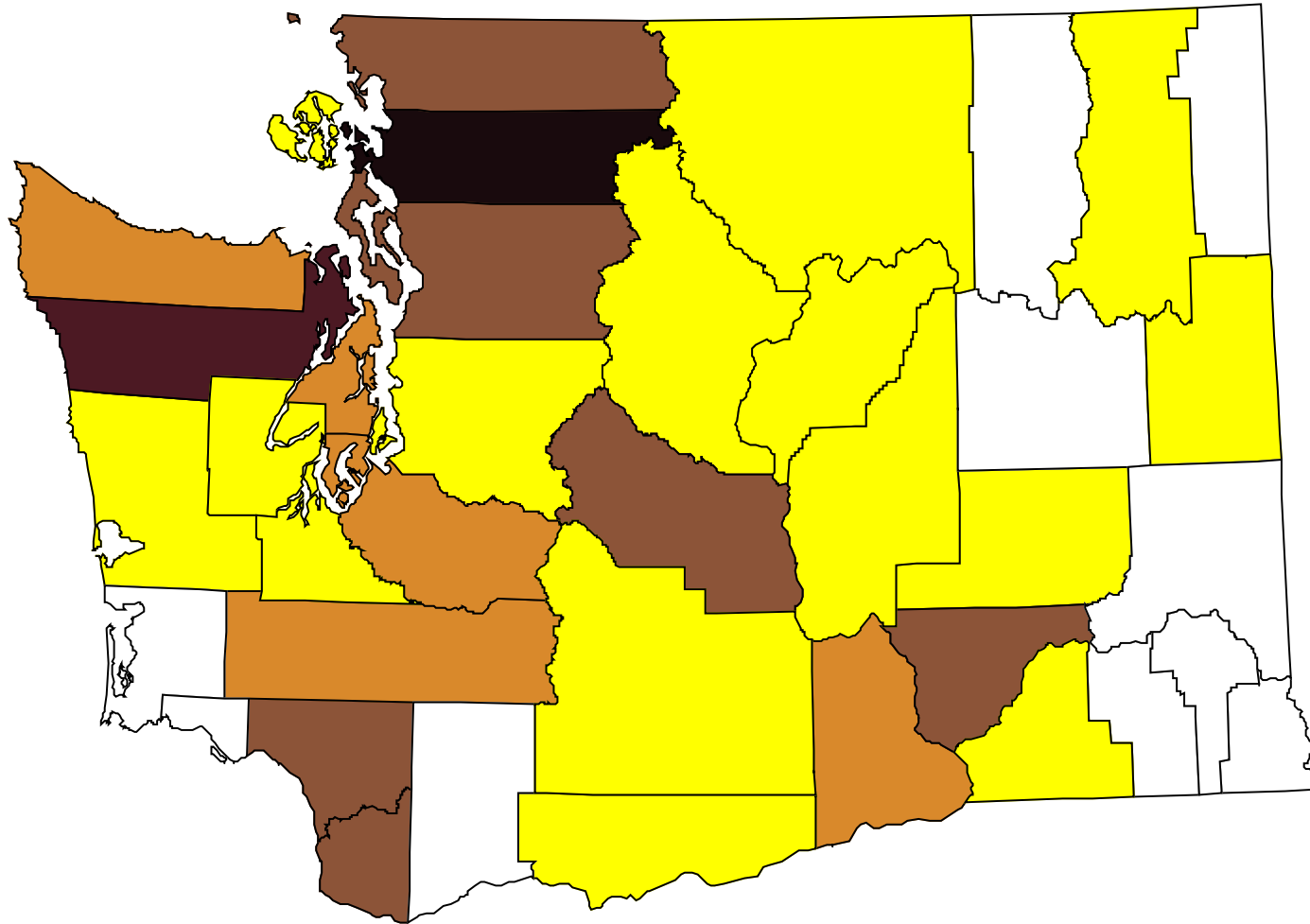
2011 Cumulative Pertussis Incidence Washington State



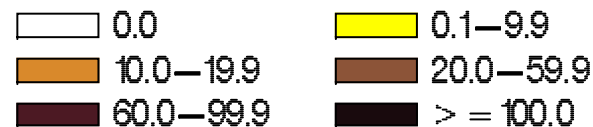
Incidence per 100,000 population per year



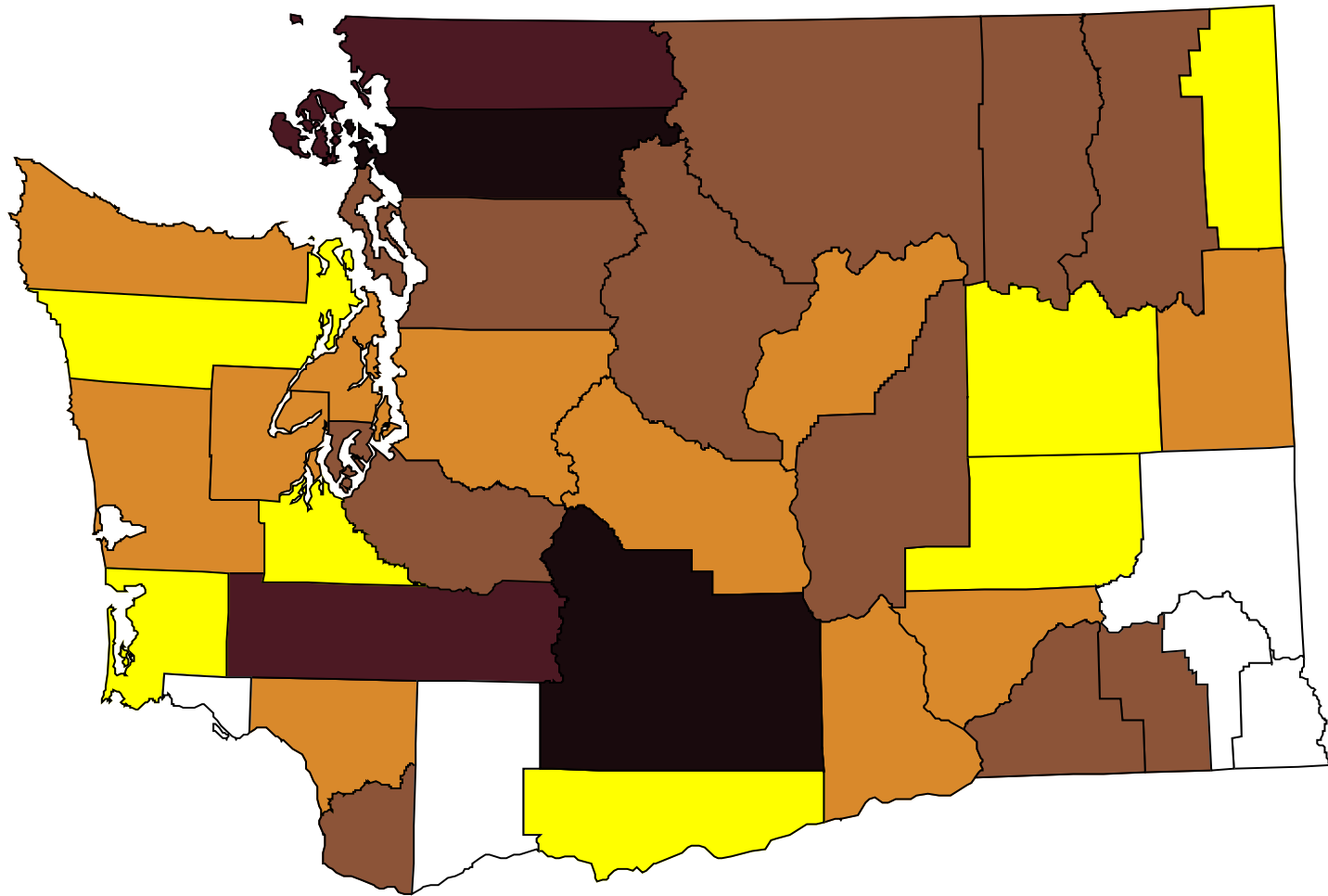
2012 Pertussis Incidence Washington State 1st Quarter (January – March) Onsets



Incidence per 100,000 population Jan_Mar12



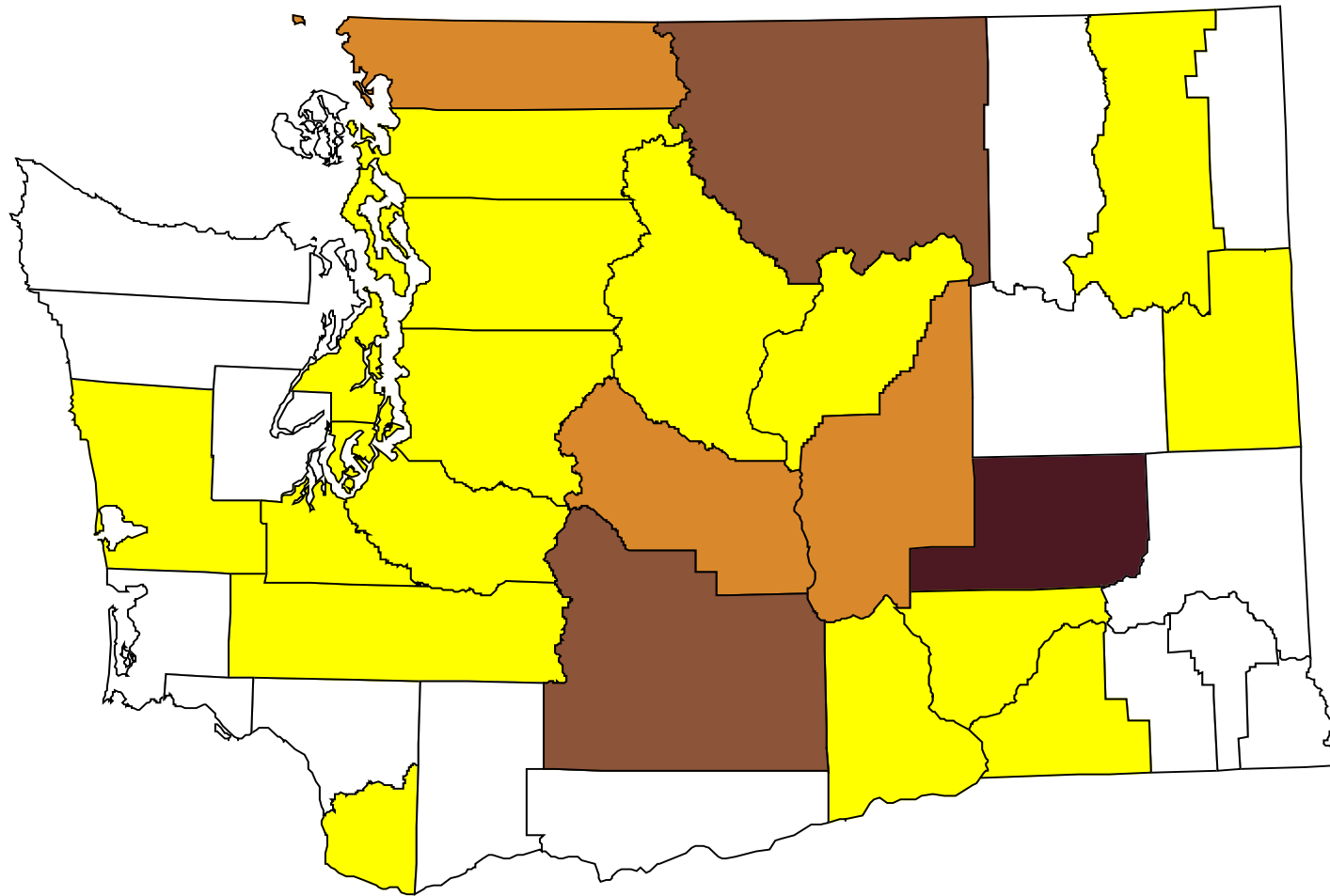
2012 Pertussis Incidence Washington State 2nd Quarter (April – June) Onsets



Incidence per 100,000 population Apr_Jun12



2012 Pertussis Incidence Washington State 4th Quarter (October – December) Onsets



Incidence per 100,000 population Oct_Dec12

0.0

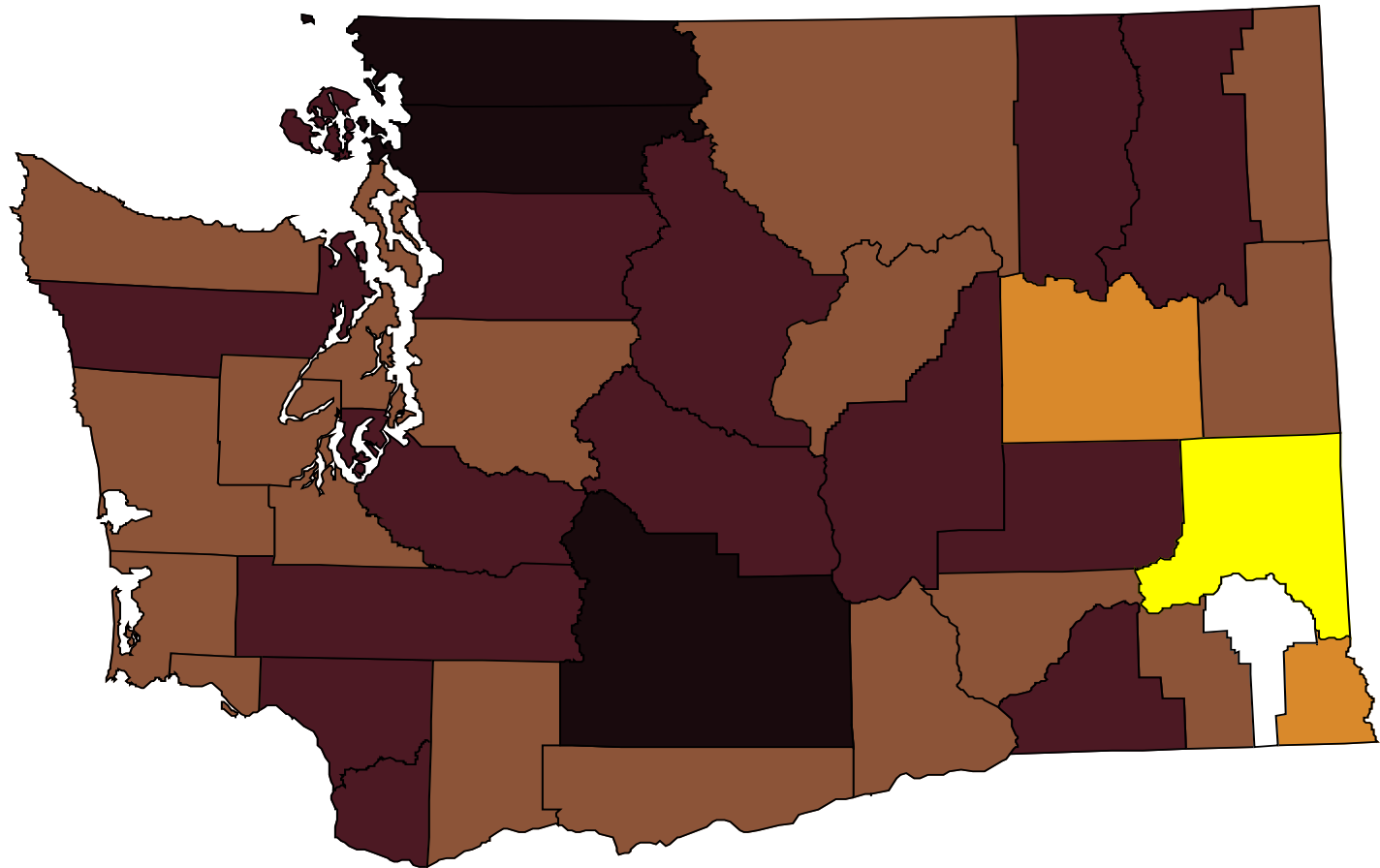
10.0–19.9

60.0–99.9

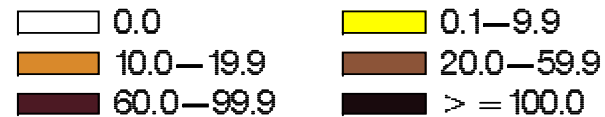
0.1–9.9

20.0–59.9

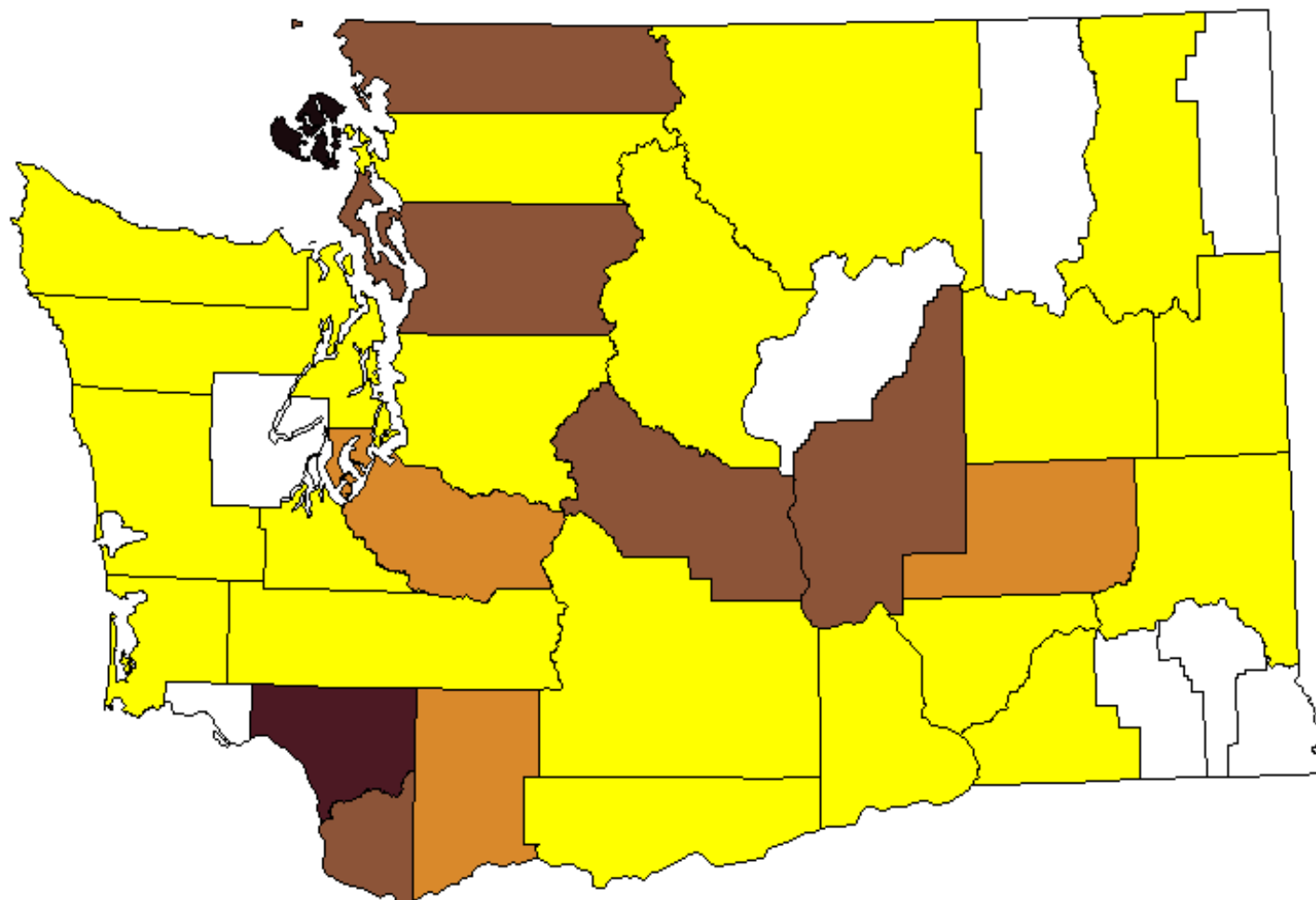
2012 Cumulative Pertussis Incidence Washington State



Incidence per 100,000 population Jan_Dec12



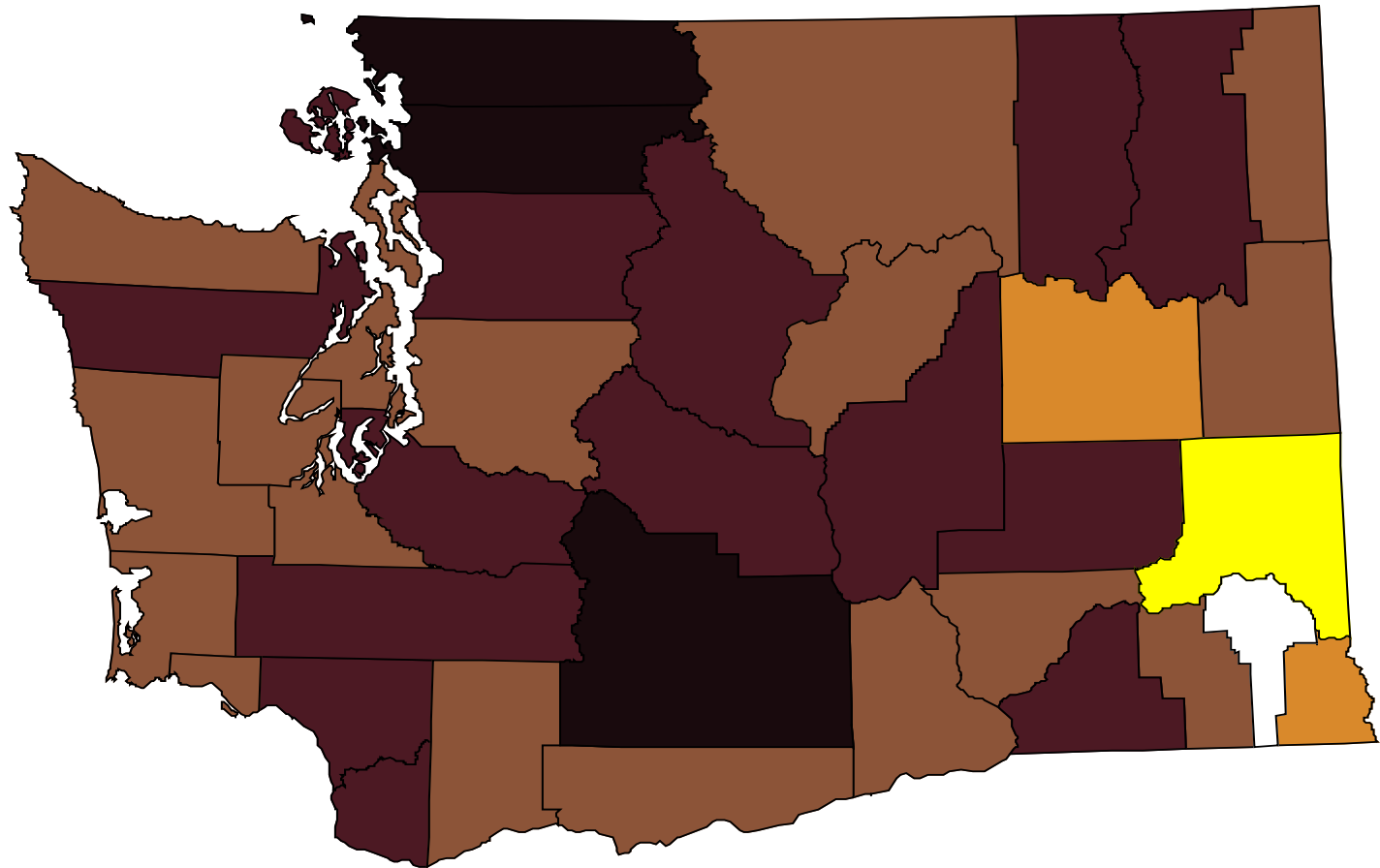
2011 Cumulative Pertussis Incidence Washington State



Incidence per 100,000 population per year



2012 Cumulative Pertussis Incidence Washington State



Incidence per 100,000 population Jan_Dec12

0.0

10.0–19.9

60.0–99.9

0.1–9.9

20.0–59.9

>= 100.0

Vaccination Status

2012 WA State Pertussis Cases

Age Group	Total Number of Cases	Cases with Valid Vaccination History		Up-to-date (UTD)	
		n	%	n	%
UTD for age per ACIP					
3m-10 y	2,218	2,101	95	1,530	73
11-12 y	396	376	95	282	75
Receipt of Tdap					
13-14 y	590	558	95	449	80
15-18 y	523	479	92	362	76

Note: Surveillance case report vaccination information is “self-reported”

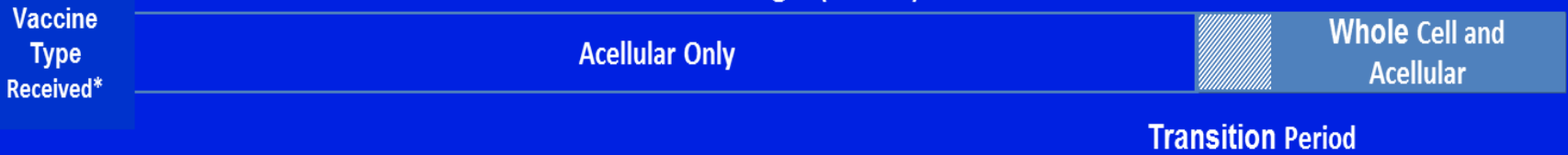
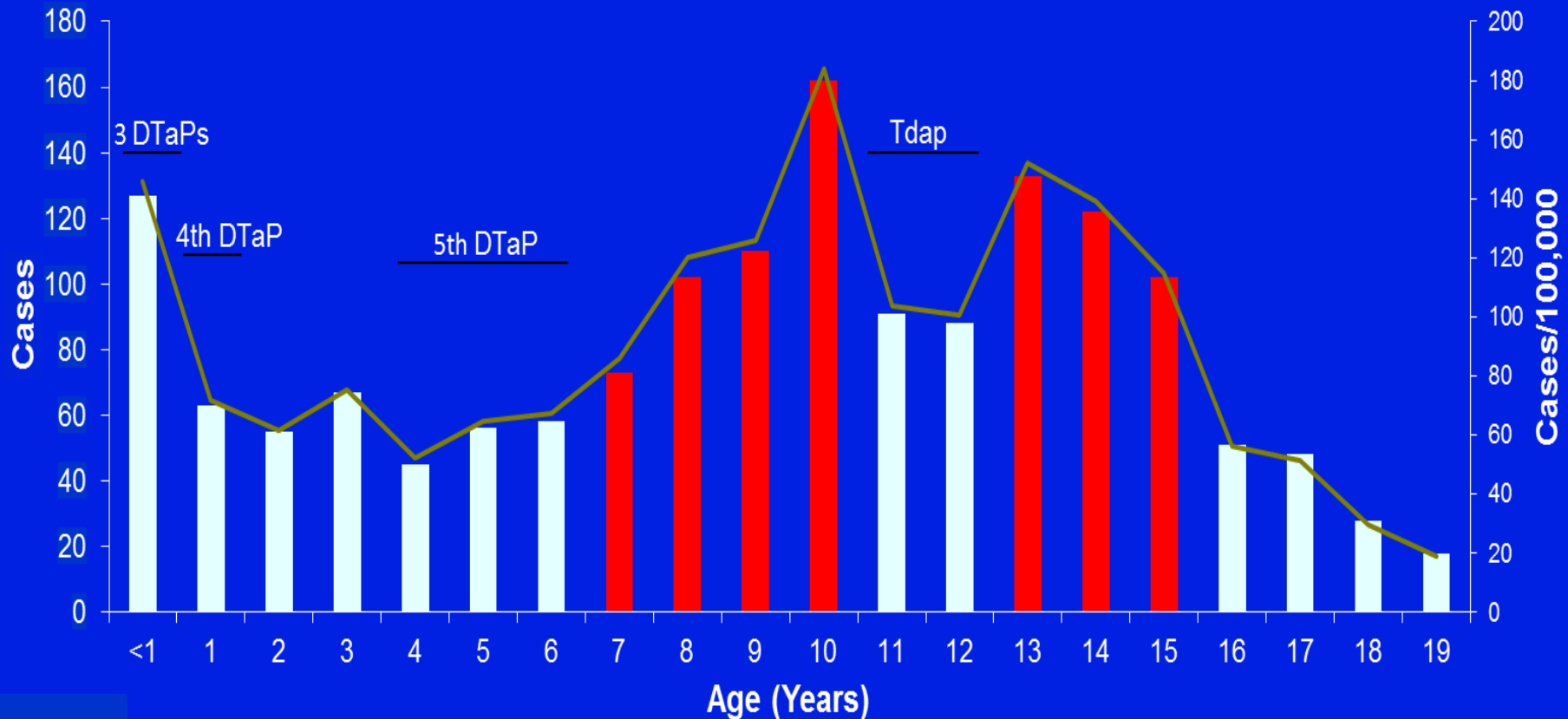
Severity of Disease Among WA State Pertussis Cases 2011 versus 2012

Outcome by Age Group	2011 N=965 % (n)		2012 N=4,921 % (n)		p-value
Hospitalized	5.1	(49/965)	2.1	(105/4913)	<0.0001
Pneumonia	4.4	(40/906)	2.4	(110/4,546)	<0.001
Death§	0.21	(2/965)	0*	(0/4,921)	<0.05

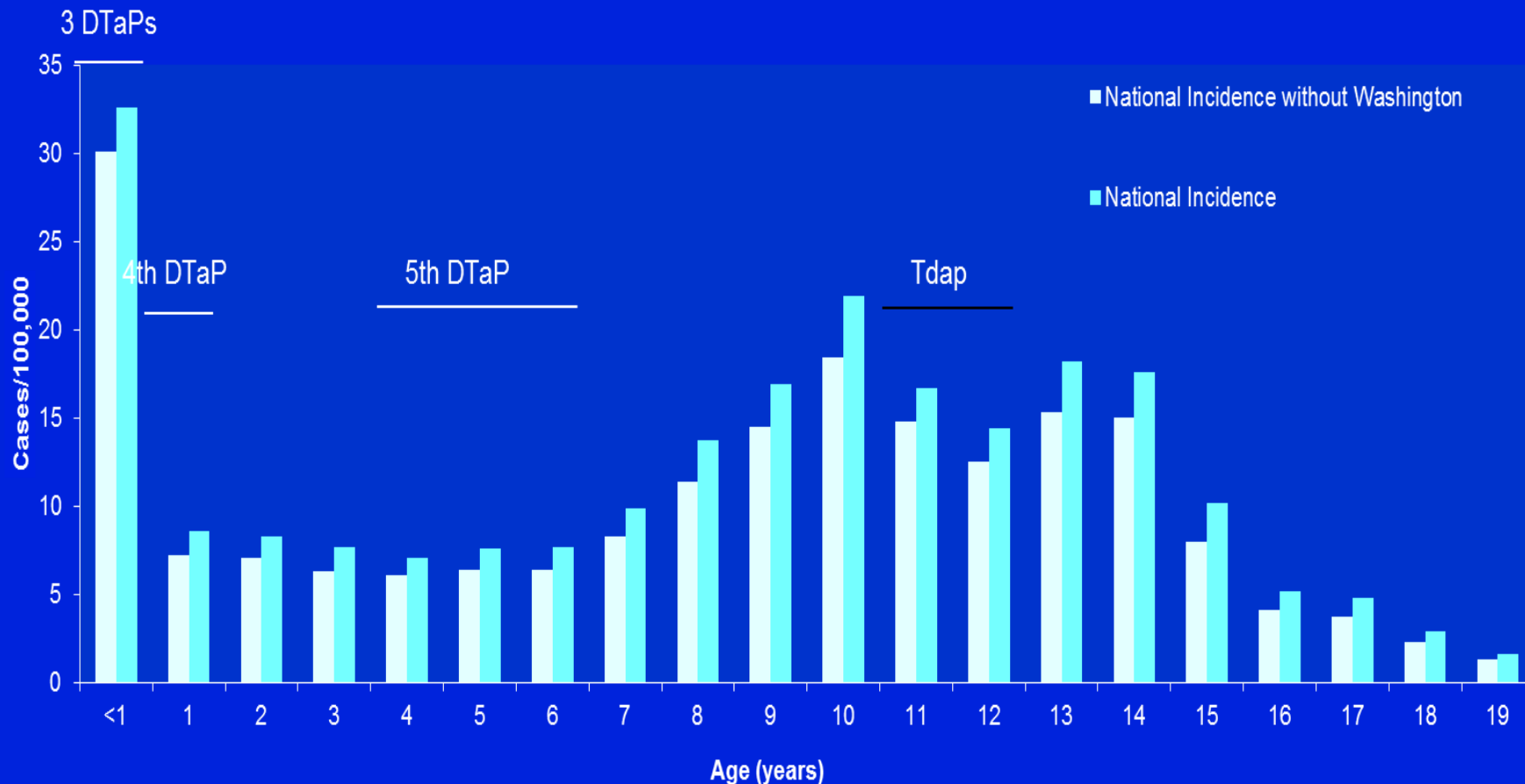
§ All reported deaths were among infants under one year of age

*Note: there was an additional death in an infant who tested positive for pertussis by PCR in 2012

Rates by Year of Age Among 2012 WA State Pertussis Cases With January 1 – June 16 Onsets

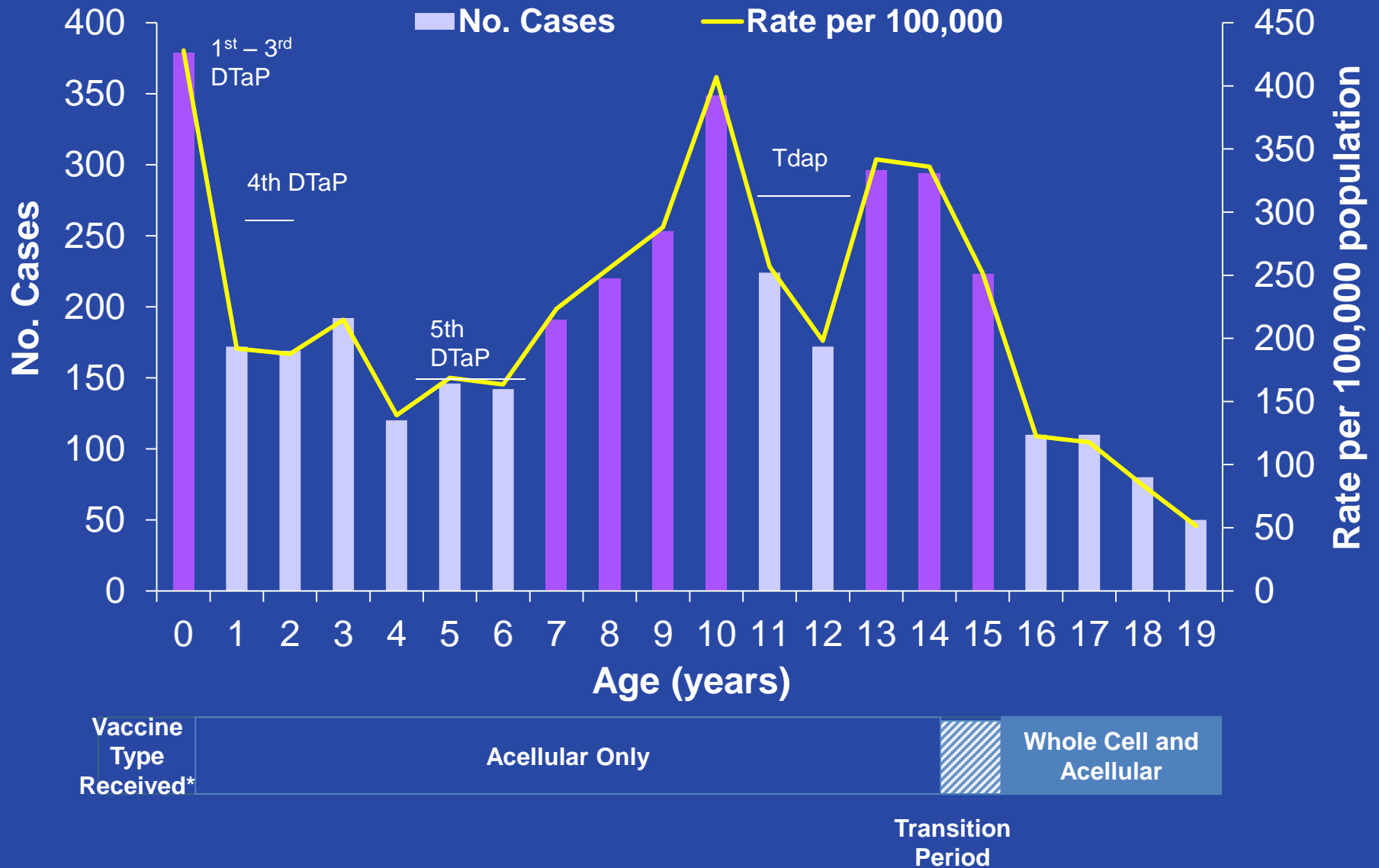


United States and WA State Pertussis Cases Rates by Year of Age January 1 - June 16, 2012



Vaccine Type	Acellular Only	Transition Period	Whole Cell and Acellular

Rates by Year of Age Among All 2012 WA State Pertussis Cases

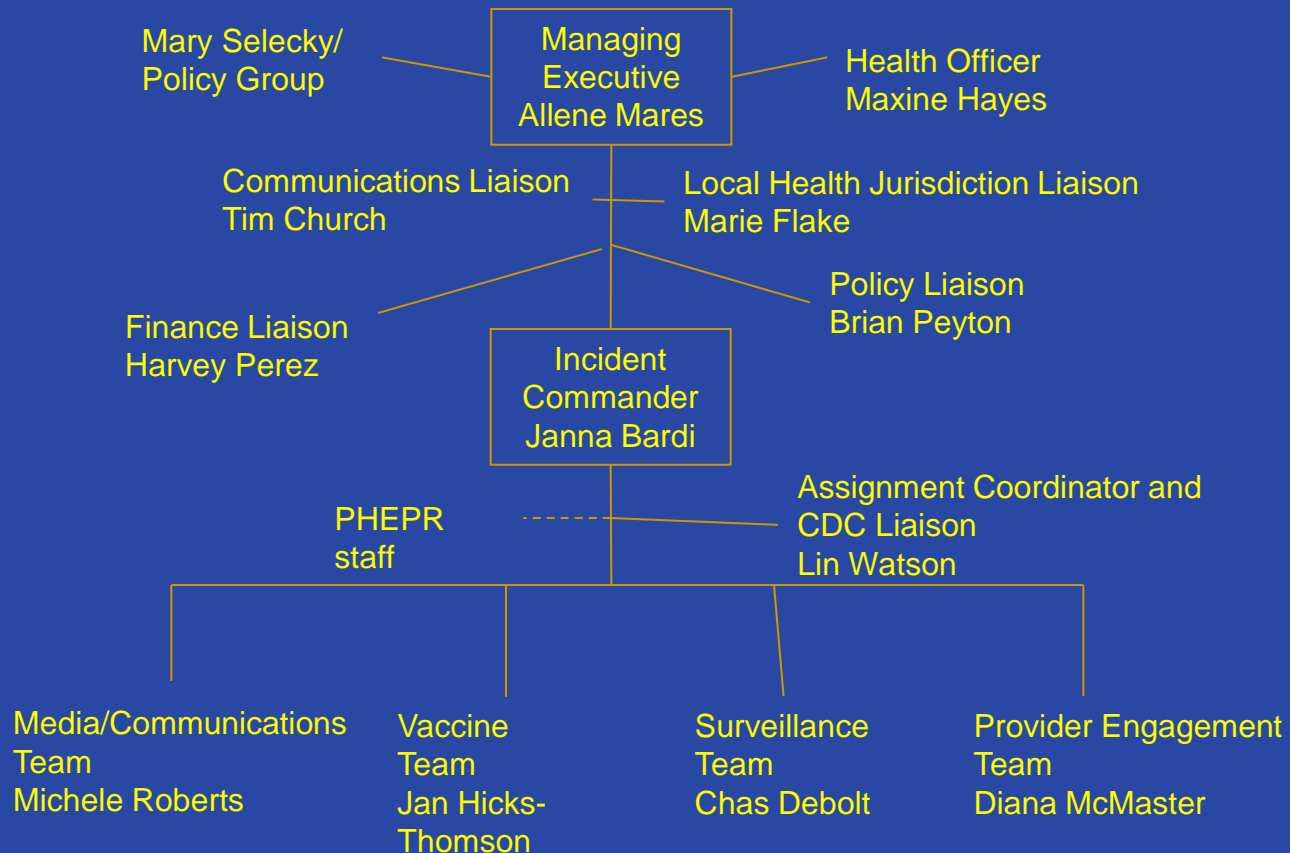


Responses to requests for information

- April-WA Vaccine Advisory Committee briefing
- June- ACIP presentation on pertussis in WA
- June –CSTE presentation
- June -NVAC presentation
- June -ACIP pertussis work group briefing
- June -WA State Board of Health briefing
- July -Immunization Action Coalition presentation
- October -ACIP update on pertussis in WA
- October-update WA VAC on pertussis
- November-WA State Board of Health update
- Data for updates to local Boards of Health

- 2013 – CSTE, USPHS Commissioned Officer's Annual Meeting, Crossborder

Department of Health Pertussis Response Structure May through September, 2012



WA State Health Department Response: Communications

- Tdap vaccination messaging in Child Profile mailings reaching 470,000 families
- Radio media buys were made
- YouTube and other social media used
- Postings on front page of agency website
- Regular updates to local/tribal health and professional medical associations
- Media events with Gov. Gregoire and Sen. Cantwell

WA State Health Department Response: Provider Education/Tools

- Initial communication sent from State Health officer to all providers requesting action
- CDC webinar training held (with continuing medical education credits)
- Updated surveillance, reporting and investigation guidelines made available
- Tools/templates for school and child care reporting to public health developed

WA State Health Department Response: Vaccine Access

- Promoted the GIFT program to provide free vaccine (more than 19,000 doses to 16 Health Jurisdictions, as of 5/1/12)
- 27,400 federally funded Tdap doses went to local health and tribes for under and uninsured adults
- Worked with local health to organize community vaccination clinics
- State immunization registry: tracked Tdap doses administered; made annual comparisons

DOH Prevention and Community Health Division:

■ Media/Communications Team

- Events with Governor Gregoire and Senator Cantwell
- PSAs & plans for new funding

■ Provider Engagement Team

- Letter to providers from State Health Officer
- Joint letter to hospitals WA Hospital Assn/DOH
- Pertussis training plan & education opportunities on website

■ Vaccine Team

- Planning for 317 Direct Assistance
- Allocated 27,000 doses of vaccine to LHJs and tribes.
- 89 sites identified to receive adult Tdap

DOH Disease Control Health Statistics and Public Health Laboratories - Surveillance Team:

- April 9 – workgroup with LHJ's to discuss surveillance changes
- April 30 - new algorithm for pertussis investigation work flow sent to LHJ's
 - 3 new tools to facilitate reporting and investigation
 - Held May 9 conference call to discuss changes
- Worked with CD/Epi Office Director to assure adequate pertussis surveillance resources
- Weekly pertussis updates posted on web throughout the epidemic

DOH Disease Control Health Statistics and Public Health Laboratories - Surveillance Team (continued):

- **Pertussis Surveillance Team Activities document created to detail assignments within the CD/Epi office**
- **May 4 - conference call with CDC to plan an Epi Aid**
- **May 4 - technical briefing to Senator Maria Cantwell for press conference**
- **May 7 – Public Health – Seattle & King County reported adding 1-2 person (surge capacity) from reserve corps and went into ICS**

Epi Aid Activities

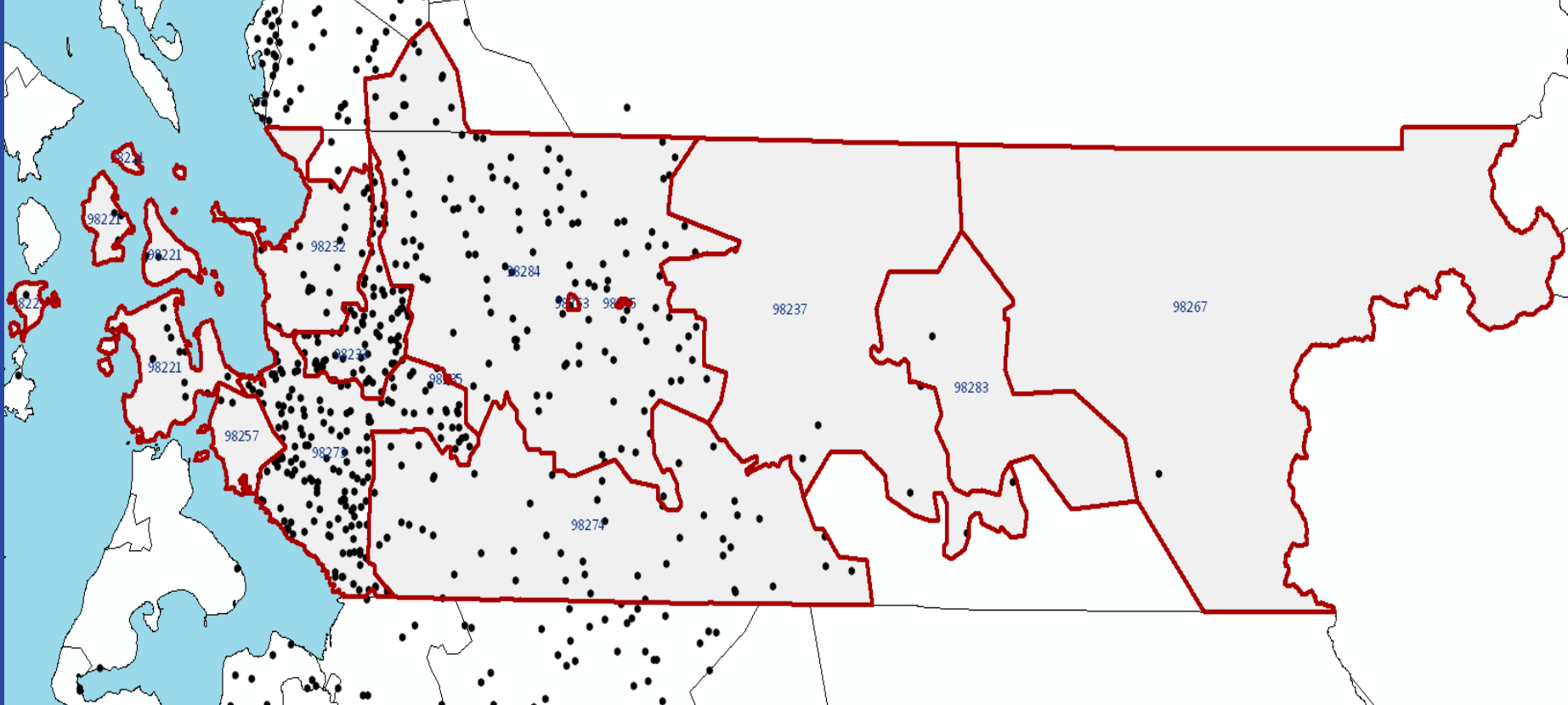
- Evaluate the situation
- Confirm pertussis
 - Not contamination
 - Not *B. holmseii*
- In depth analysis of cases & comparison to national data
- MMWR

Epi Aid Activities (Continued)

- **Pertussis PCR Lab Survey**
 - Survey monkey
 - Open until October 19th
 - Sent to all regulated labs performing non-waived tests (hospital/commercial/public health labs)

- **County-specific reports**
 - Prepared for 20 high volume counties
 - Are being updated in 2013 as 2012 summaries

Figure 1. Geographic Distribution of Confirmed and Probable Cases in Skagit County by Zip Code, January 1-June 16, 2012



* Zip codes in Skagit County are highlighted in red. Some zip codes may extend into neighboring counties. Each dot represents one case. Cases are randomly distributed within the zip code and do not correspond to exact geographic coordinates.

*Geographic distribution displayed only for cases with known zip code (470/485 cases, 96.9%).

CDC and WA DOH collaborative project: Tdap Vaccine Effectiveness (VE) and Duration of Protection Project

- Initiated in June 2012
- Objectives:
 - Assess the effectiveness and duration of protection of Tdap vaccination in Washington State adolescents 11-18 years of age.
 - Evaluate impacts of whole cell or acellular pertussis vaccination during childhood on Tdap vaccine effectiveness for these adolescents.
- Preliminary data to be presented to ACIP in June 2013

Acknowledgements

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- Wayne Turnberg DrPH

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