

Air Quality and Asthma in WA state: What do we know?

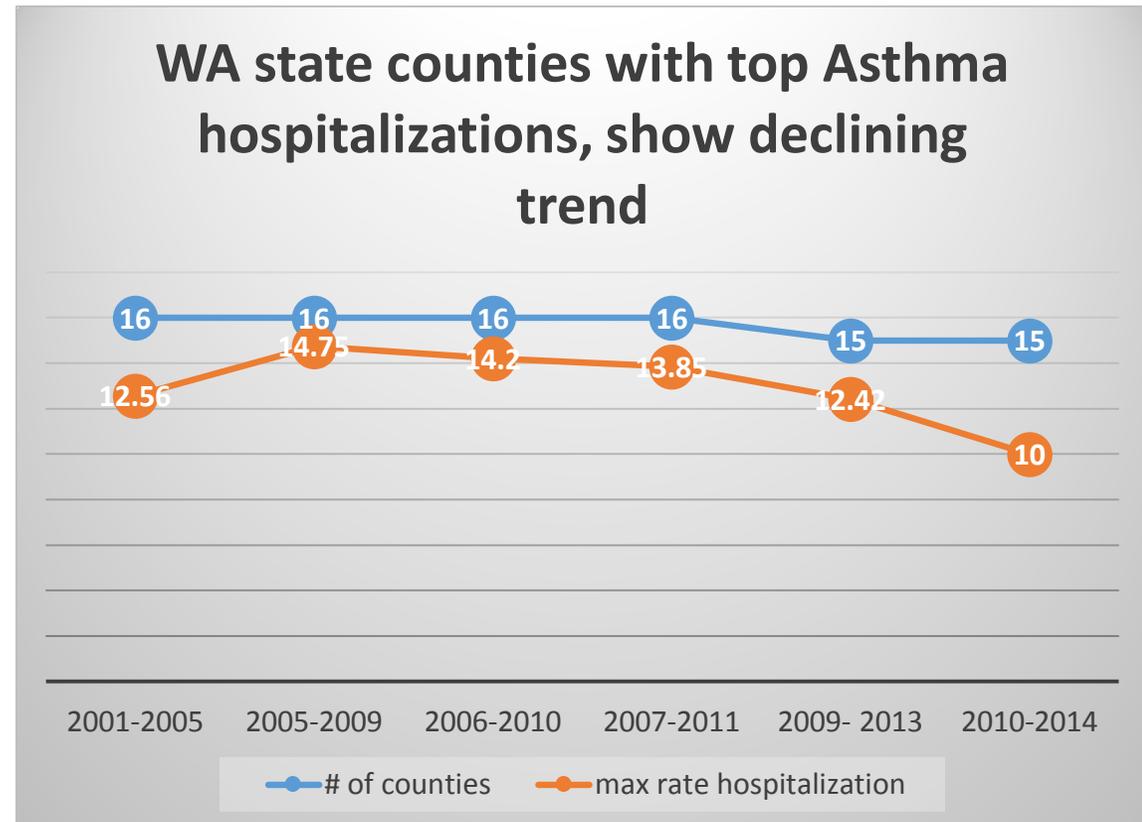
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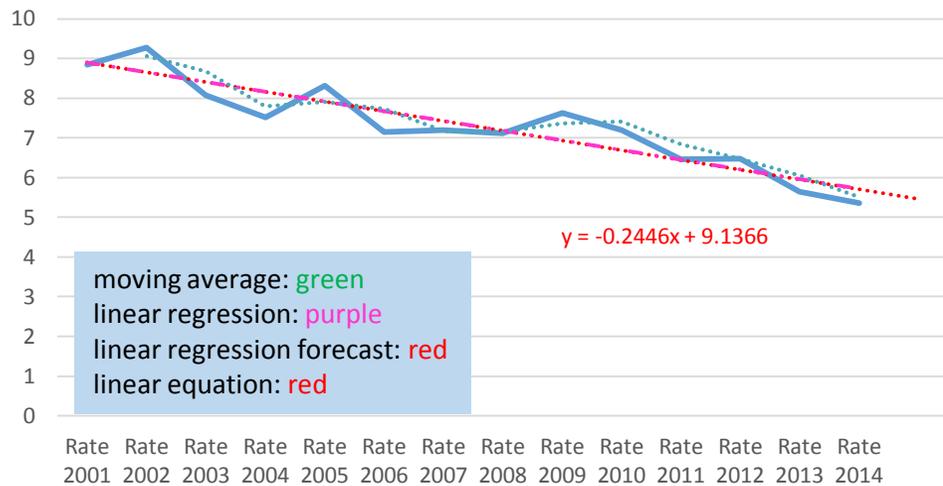
WA state shows a declining trend in Asthma Hospitalization rates

- The number of counties with highest rates of hospitalization (>8/10,000) has begun to decline
- The Maximum rate of hospitalization category (how high above >8/10,000) initially increased from 12.5 in early 2000s, reached a peak of 14.75 in mid to late 2000s and has now begun a steady decline to 10 in the first half of the 2010's
- Fewer counties have hi rates and the rates are shrinking

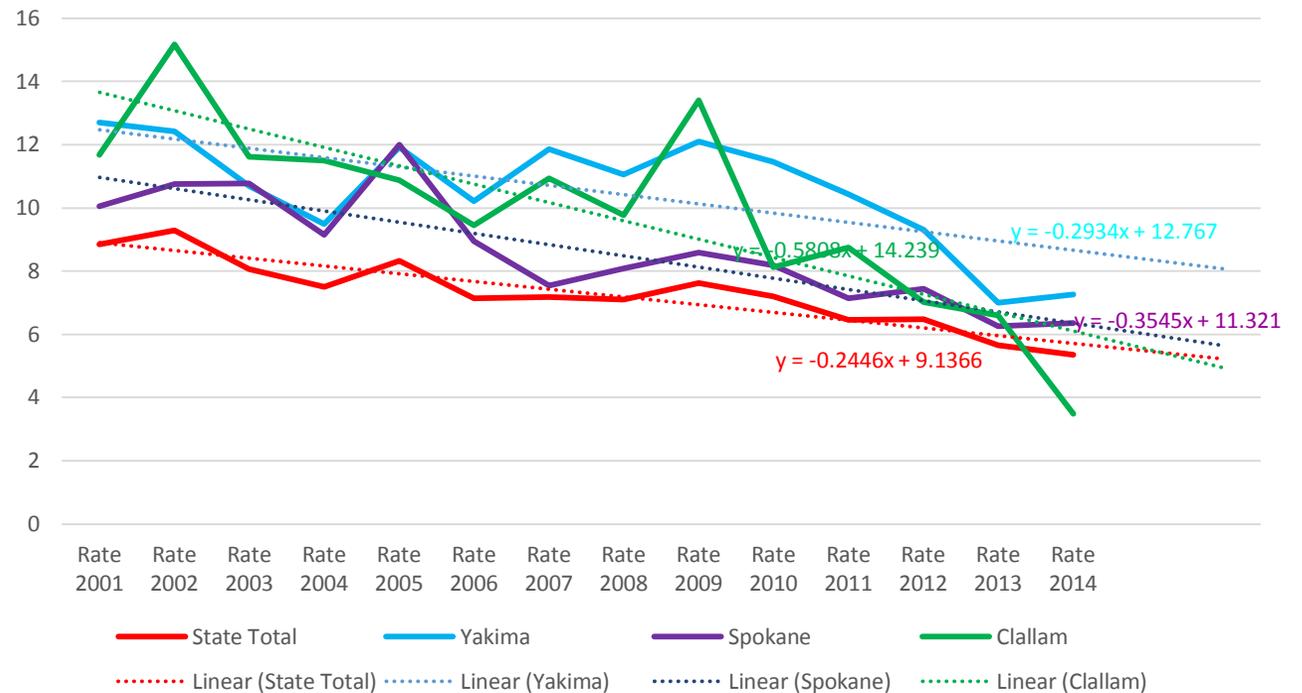


While WA state as a whole is improving, still need to address “at risk” counties

Asthma Hospitalization WA State Total



Asthma Hospitalization in Select High Rate Counties vs. State Total



- Where rates are higher than state
- Where negative trend is less well established
- Where values are “not reliable”
- Where data is missing/suppressed

What policy(s) could be responsible for this decline?

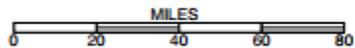
The benefits are clear, identify community specific cause(s) and compare cause(s) across counties....

- Awareness (training healthcare workers, educating patient communities)
- Monitoring of air quality (PM 2.5, ozone...)
- New asthma therapeutics on market
- Air Pollution Education programs for public (idle free zones)
- Education programs physicians (asthma management strategies)
- Reduced pesticide use
- ??

FEDERAL LANDS AND INDIAN RESERVATIONS



Some small sites are not shown, especially in urban areas.



Albers equal area projection

Abbreviations

AFB	Air Force Base
IR	Indian Reservation
NAS	Naval Air Station
NF	National Forest
NHP	National Historic Park
NHR	National Historical Reserve
NM	National Monument



Red circle represents regions where asthma hospitalization rates were greater than 8 for more than half of the years recorded for that county (2001-2014)



WA state Asthma Hospitalization Rate by County in 5 year windows



2010-2014 (Asthma Hospitalization Rate: 7.8-10, 5.96-7.78, # Of counties: 8/7)

North East counties:

Ferry, Stevens, Lincoln, Pend Orielle, Spokane

Central counties:

Yakima, Pierce, Benton, King, Chelan, Whatcom

Coastal:

Cowlitz, Wahkiakum, Clalam, Grays Harbor

2009-2013 (Asthma Hospitalization Rate: 8.8-12.42, 6.68-8.8, # of counties: 8/7)

North East counties:

Ferry, Lincoln, Pend Orielle, Spokane, Stevens

Central counties:

Yakima, Pierce, Benton, King, Chelan, Whatcom

Coastal:

Cowlitz, Wahkiakum, Clalam, Grays Harbor

2007-2011 (Asthma Hospitalization Rate: 9.11-13.85, 7.1-9.1, # of counties: 8/8)

North East counties:

Stevens, Lincoln, Pend Orielle, Spokane, Ferry

Central counties:

Yakima, Pierce, Benton, Whatcom, Grant, Adams, Franklin

Coastal:

Cowlitz, Wahkiakum, Clalam, Grays Harbor

WA state Asthma Hospitalization Rate by County in 5 year windows



2006-2010 (Asthma Hospitalization Rate: 8.9-14.2, 7.26-8.94, # of Counties 8/8)

North East counties:

Stevens, Lincoln, Spokane

Central counties:

Yakima, Pierce, Benton, Grant, Adams, Franklin, Klickitat, Whatcom

Coastal:

Cowlitz, Clalam, Wahkiakum, Jefferson, Grays Harbor

2005-2009 (Hospitalization Rate: 9.6-14.75, 7.6-9.6, # of Counties 8/8)

North East counties:

Stevens, Lincoln, Spokane,

Central counties:

Yakima, Adams, Klickitat, King, Pierce, Benton, Grant, Franklin, Whatcom

Coastal:

Cowlitz, Wahkiakum, Clalam, Grays Harbor

2001-2005 (Asthma Hospitalization Rate: 9.56-12.56, 8.7-9.56, # of Counties 9/7)

Eastern counties:

Stevens, Lincoln, Spokane, Columbia

Central counties:

Yakima, Whatcom, King, Pierce, Grant, Adams, Franklin

Coastal:

Cowlitz, Wahkiakum, Clalam, Grays Harbor, Jefferson

- The Tracking Network Nationally Consistent Data Measures define “asthma hospitalization” as resident hospitalizations for asthma which are coded to ICD-9-CM code 493.XX in the primary (first listed) discharge diagnosis field.
- Acute exacerbations of asthma (asthma attacks) most commonly present to hospital emergency departments (ED). Relatively few ED visits for asthma result in an inpatient hospital admission, and therefore asthma hospitalization data do not provide a complete picture of the burden of severe or unmanaged asthma cases among Washington residents. There is no statewide database of ED visits in Washington.

Standards

- The target for children and adults aged 5 to 64 is 8.7 hospitalizations per 10,000 (age-adjusted).
- The target for adults aged 65 years and older is 20.1 hospitalizations per 10,000 (age-adjusted).

Citation

- Washington Tracking Network, Washington State Department of Health. Web. "Asthma Hospitalizations: Age-Adjusted Rate per 10,000 (for specified age groupings)". Data obtained from the Center for Health Statistics. Washington Comprehensive Hospital Abstract Reporting System (CHARS). Published: 2014.