



Native Health in the Bemidji Area

Flu and Pneumonia

What is the flu?

Influenza (flu) is a respiratory illness caused by the flu virus. It is generally a seasonal illness that starts in the fall and goes through spring (Figure 1). The number of cases and deaths from flu varies year to year, depending on the severity of the strains of virus circulating.¹

Symptoms of the flu come on quickly, unlike a cold where symptoms come on more gradually, and often include fever, chills, cough, headache, or muscle aches. The illness can range from mild to severe, and in some cases can lead to death. Complications of the flu may be sinus or ear infections or more serious such as pneumonia or organ failure.¹

What is pneumonia?

Pneumonia is an infection that affects the lungs and may cause them to fill with fluid, which can make it hard to breathe. Symptoms can include fever, chills, cough, difficulty breathing, or chest pain. Pneumonia can be

caused by bacteria, viruses (like influenza), or fungi. Approximately one-third of pneumonia cases are caused by respiratory viruses such as influenza.²

Who is at risk?

Everyone is at risk of serious complications of the flu or of developing pneumonia. However, young children, adults over 65, and people with underlying health conditions (such as asthma, heart disease, or diabetes) are at a higher risk.^{1,2}

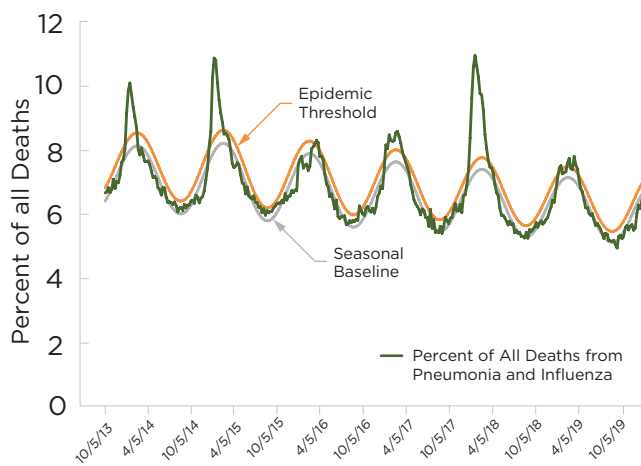
How to prevent the flu or pneumonia

The easiest way to prevent the flu or pneumonia is through vaccination. Because there are multiple influenza viruses that are always changing, it is crucial to get vaccinated every year. The flu vaccine is recommended for everyone over six months of age.¹ There is also a pneumonia vaccine that protects against common causes of bacterial pneumonia. It is recommended for children under two, adults older than 65, and people with certain medical conditions.² Other healthy habits such as washing your hands, covering your cough, and staying home if you are sick can help prevent the spread of the flu or pneumonia.^{1,2}

How do flu and pneumonia affect the three-state area?

Flu and pneumonia infection rates are not recorded by race, so it is necessary to look at mortality rates to observe how American Indian/Alaska Natives are impacted by flu or pneumonia. American Indian/Alaska Natives had higher age-adjusted mortality rates from flu and pneumonia than whites across the Bemidji Area. In Minnesota and the three-state area, the American Indian/Alaska Native age-adjusted mortality rate was statistically significantly higher than whites (2.5 times higher and 1.5 times higher, respectively) (Figure 2, Table 2).

Figure 1. Pneumonia and Influenza Mortality as a Percent of All Deaths, 2013-2019



Adapted from CDC Flu Interactive Website³

The Great Lakes Inter-Tribal Epidemiology Center (GLITEC)'s *Native Health in the Bemidji Area* fact sheet series presents data on various health-related topics for communities in the Bemidji Indian Health Service Area (Michigan, Minnesota, Wisconsin, and Chicago). GLITEC welcomes discussion with Bemidji Area communities' health staff in the use of this fact sheet to support assessment, planning, and evaluation functions. Please contact us to discuss how we may support your community.

Table 1. Influenza and Pneumonia Age-Adjusted Mortality Rates (per 100,000) in Michigan, Minnesota, and Wisconsin, by CHSDA¹ Status, 2014-2018

	CHSDA Status	Deaths	Age-adjusted Mortality Rate	95% Confidence Interval
Michigan	CHSDA	2,798	14.0	13.4-14.5
	Non-CHSDA	6,310	14.9	14.5-15.3
Minnesota**	CHSDA	710	11.9	11.0-12.8
	Non-CHSDA	2,578	9.2	8.9-9.6
Wisconsin*	CHSDA	1,690	12.5	11.9-13.1
	Non-CHSDA	3,301	13.9	13.4-14.4

Source: CDC WONDER

¹CHSDAs are Contract Health Service Delivery Areas: counties that include or touch a reservation boundary

*Age-adjusted mortality rate is significantly lower in CHSDA counties than in non-CHSDA counties

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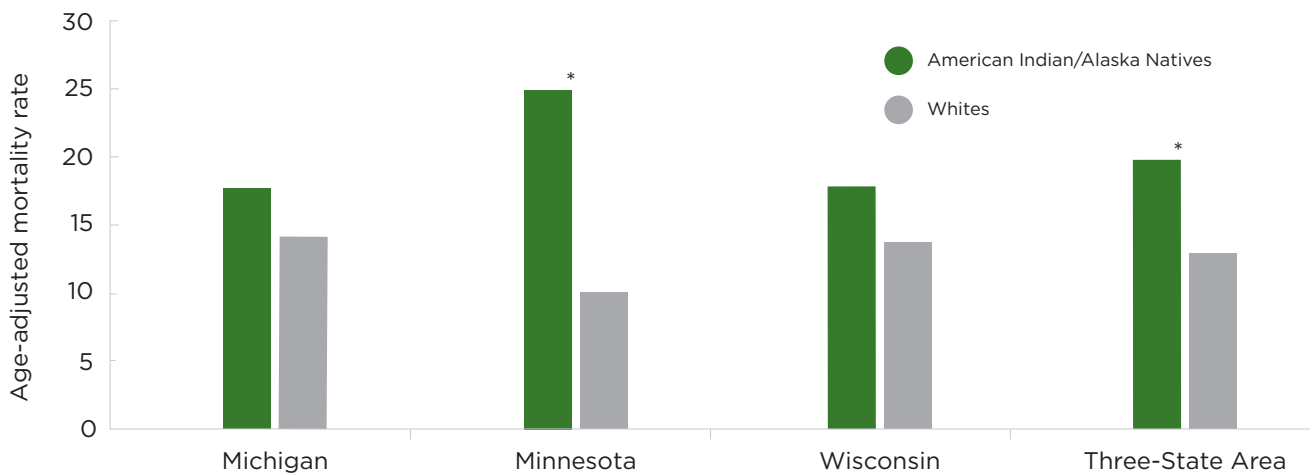
Table 2. Influenza and Pneumonia Age-Adjusted Mortality Rates (per 100,000) Among American Indian/Alaska Natives and Whites in Michigan, Minnesota, Wisconsin, and the Three-State Area, 2009-2018

		Deaths	Age-adjusted Mortality Rate	95% Confidence Interval
Michigan	American Indian/Alaska Native	101	17.7	14.0-21.3
	White	14,993	14.2	13.9-14.4
Minnesota*	American Indian/Alaska Native	112	25.0	19.7-30.4
	White	6,273	10.0	9.7-10.2
Wisconsin	American Indian/Alaska Native	72	17.8	13.5-23.1
	White	9,496	13.7	13.5-14.0
Three-State Area*	American Indian/Alaska Native	285	19.8	17.3-22.4
	White	30,762	13.0	12.9-13.2

Source: CDC WONDER

*Age-adjusted mortality rate is significantly higher in American Indian/Alaska Natives than whites

Figure 2. Influenza and Pneumonia Age-Adjusted Mortality Rates (per 100,000) Among American Indian/Alaska Natives and Whites in Michigan, Minnesota, Wisconsin, and the Three-State Area, 2009-2018



Source: CDC WONDER

*Age-adjusted mortality rate is significantly higher in American Indian/Alaska Natives than whites

Sources:

1. Key Facts About Influenza (Flu). Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/about/keyfacts.htm>. Accessed July 29, 2020.
2. Pneumonia. Johns Hopkins Medicine. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/pneumonia>. Accessed July 23, 2020.
3. National, Regional, and State Level Outpatient Illness and Viral Surveillance. CDC. FluView Interactive Web site. Published 2020. Accessed July 23, 2020.