Oregon ESSENCE Syndromic Hazard Report

January 26, 2017

SYNDROMIC SURVEILLANCE is the near real-time monitoring of key health indicators in emergency department (ED) visits. Oregon's syndromic surveillance project (Oregon ESSENCE) tracks the number of visits for specific patient symptoms (what the patient says when they register in the ED). We look at symptoms associated with known health effects for the season.

SIMILAR SYMPTOMS are grouped together into "syndrome" categories. For example, "wheezing" and "difficulty breathing" are grouped into the asthma-like query. By comparing the counts we see against those we would expect to see this time of year (using statistical models), we can identify any trends in visits.

EMERGENCY DEPARTMENT VISIT INFORMATION is collected from hospitals and urgent care centers across the state. Currently, 60/60 eligible hospitals are sending data every day for syndromic surveillance.

SEASONAL HAZARDS for fall and winter include air inversions, windstorms, and winter storms, which can cause extensive damage, including the loss of electricity, slippery surfaces, and flooding throughout the Pacific Northwest.

MONITORING Oregon ESSENCE provides key information on population health during seasonal hazard events. ESSENCE users can now reproduce these queries themselves by following instructions posted at www.healthoregon.org/essence

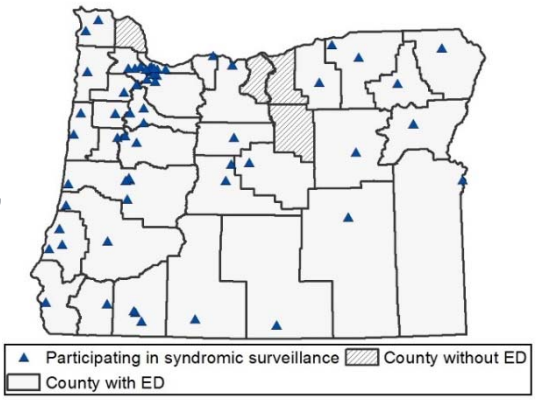
HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Air inversions or use of wood-burning stoves can lead to changes in air quality, exacerbating respiratory conditions such as asthma.
- Prolonged power outages or flooding can lead to increases in stomach illness as food goes unrefrigerated or water sources change. Some infectious diseases that cause stomach illness are also more common in the winter months.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Winter weather and windstorms can cause the power to go out. Sometimes BBQ grills or generators are used near or inside the home during outages, leading to carbon monoxide poisoning.

INSIDE THIS HAZARD REPORT you will see a snapshot of the health effects of fall and winter hazards for the state.

ESSENCE USERS can use these queries to look for regional health effects not captured in a statewide view.

SYNDROMIC COVERAGE by county is detailed in the map below.



OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

Oregon Health Authority

WHAT ARE YOU SEEING?

Most winter hazard-related injuries will occur during an event, during clean-up activities, or while power is being restored. The charts below show visit counts matching each query. See the box on the left for how to read the charts.

HOW TO READ THESE CHARTS

Visit counts for each week are color-coded in the charts to the right. Blue dots indicate normal visit counts, and yellow or red dots mean the counts for that week are abnormally high. We are looking for sudden or sustained increases in visits.

Counts are reported by CDC MMWR week, which always start on Sunday. In 2016 and 2017, this includes:

- **Week 40, October 2**
- **Week 44, October 30**
- **Week 48, November 27**
- **Week 52, December 25**
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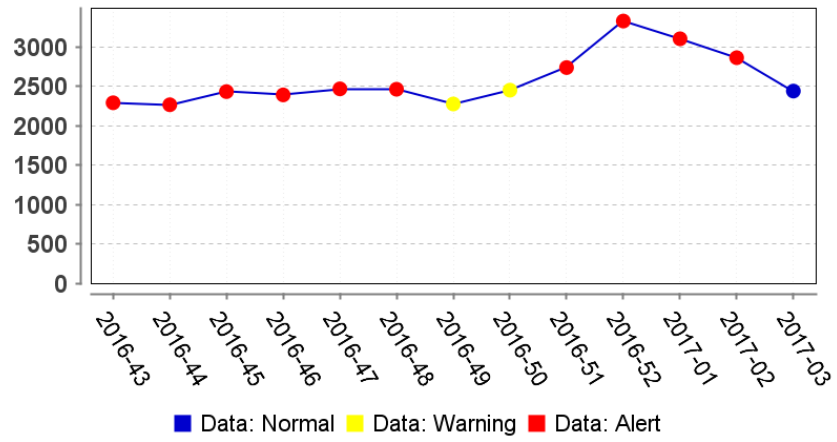
- **Week 6, February 5**
- **Week 10, March 5**
- **Week 14, April 2**

ASTHMA-LIKE QUERY looks for the codes for the "asthma" (ICD-9 code 493 and ICD-10 code J45) and words like "asthma," "wheezing," and "shortness of breath."

GASTROINTESTIONAL (GI) SYNDROME QUERY looks for hundreds of free text terms related to GI illness, including abdominal pain, vomiting, diarrhea, and loss of appetite. Importantly, this syndrome does not look for diagnosis codes.

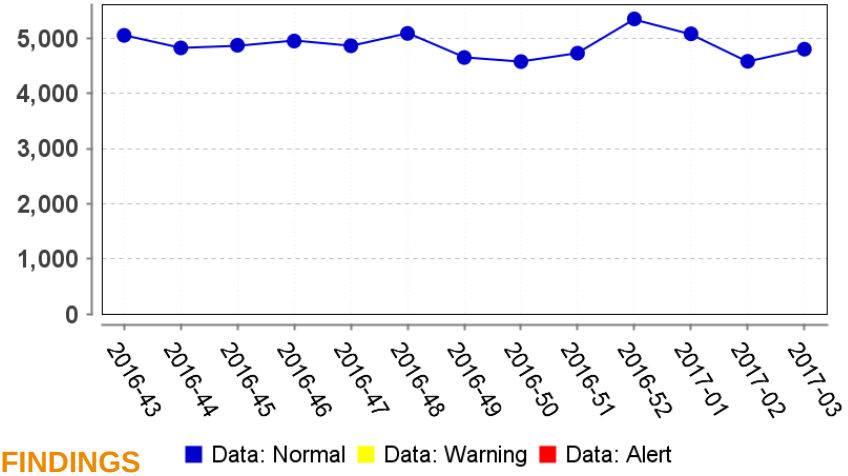
ASTHMA-LIKE QUERY



FINDINGS

In this chart, we see that visits for asthma-like complaints have been elevated since mid-October, peaked in Week 52, and decreased to expected levels for the first time this season during Week 3. Visits may normally increase due to seasonal respiratory infections, colder outdoor temperatures, and more exposure to indoor allergens, like dust, mold, and pet dander. A sudden or sustained increase in asthma-like visits could indicate an environmental event, such as a change in temperature or air quality. Those with heart or lung problems, as well as young children, are especially vulnerable.

GASTROINTESTIONAL (GI) SYNDROME QUERY



FINDINGS

In this chart, we see that visits for gastrointestinal (GI) complaints are not currently above expected levels. An increase in GI visits could indicate that an infectious disease is widely circulating or that after a storm, food or water supplies are affected. Post-storm, check for local boil-water advisories, and throw away food that cannot be kept cold or properly heated.

OREGON ESSENCE

FALL SYNDROME QUERY **looks for dozens of free text terms related to falls, including slipped, tripped, and stumbled. Importantly, this sub-syndrome does not look for diagnosis codes.**

CARBON MONOXIDE (CO) POISONING QUERY **looks for the codes for the "toxic effect of carbon monoxide" (ICD-9 code 986 and ICD-10 code T58) and words related to CO poisoning.**

SYNDROMIC SURVEILLANCE FOR PUBLIC HEALTH ACTION

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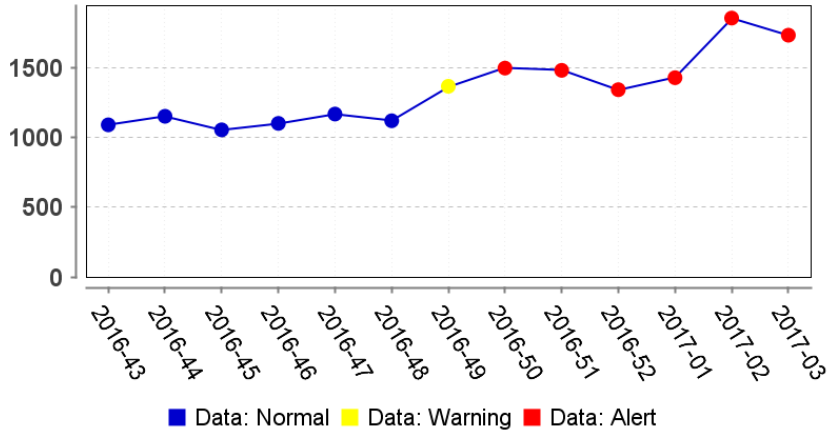
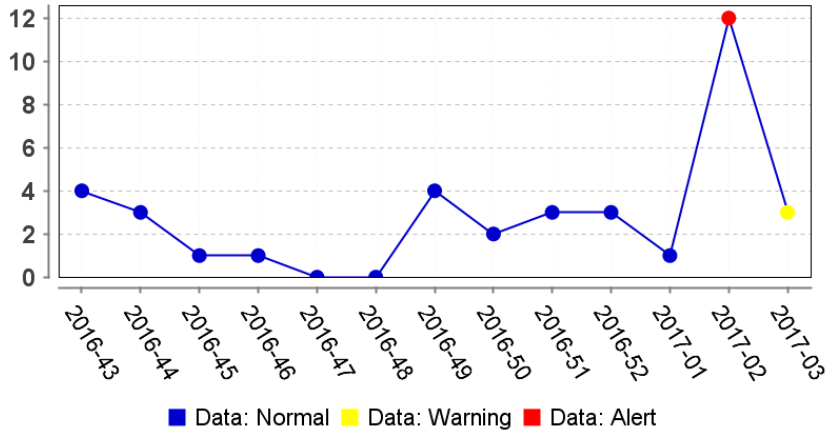
FALL SYNDROME QUERY



FINDINGS

In this chart, we see that fall-related visits have been above expected levels since December and have fluctuated with winter weather events. This is a broader search than the "winter weather-related slips and falls" query. Patients often do not give a reason for a fall, such as "I fell on the ice," but fall visits appear to increase during and after storm events. Looking at this syndrome shows the magnitude of potentially weather-related injuries. As always, walking on ice is extremely dangerous.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning rose above expected levels during Week 2, when most of the state was experiencing winter weather and there were several clusters of exposure. CO poisoning is preventable. Using generators, space heaters, and even wood fires increase CO in the air, leading to potential poisonings. If poisoning is suspected, seek fresh air and medical attention.

Oregon ESSENCE Syndromic Hazard Report

January 18, 2017

SYNDROMIC SURVEILLANCE is the near real-time monitoring of key health indicators in emergency department (ED) visits. Oregon's syndromic surveillance project (Oregon ESSENCE) tracks the number of visits for specific patient symptoms (what the patient says when they register in the ED). We look at symptoms associated with known health effects for the season.

SIMILAR SYMPTOMS are grouped together into "syndrome" categories. For example, "wheezing" and "difficulty breathing" are grouped into the asthma-like query. By comparing the counts we see against those we would expect to see this time of year (using statistical models), we can identify any trends in visits.

EMERGENCY DEPARTMENT VISIT INFORMATION is collected from hospitals and urgent care centers across the state. Currently, 60/60 eligible hospitals are sending data every day for syndromic surveillance.

SEASONAL HAZARDS for fall and winter include air inversions, windstorms, and winter storms, which can cause extensive damage, including the loss of electricity, slippery surfaces, and flooding throughout the Pacific Northwest.

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EVENT: January 10-18, 2017

The National Weather Service issued numerous advisories, watches, and warnings for a winter storm event that included near record-breaking snowfall in the Portland Metro area and the Columbia River Gorge as well as subsequent icy conditions and freezing rain.

This special report includes daily counts of ED and urgent care visits in Oregon, including injuries, winter weather-related slips and falls, and carbon monoxide poisonings, for **January 1-17, 2017**. As clean-up continues and as we prepare for potential flooding and future winter storms, these and other weather-related health outcomes will continue to be monitored. It is important to note that daily visit counts may be unstable. A warning or alert does not necessarily indicate an event of public health significance.

HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Injuries can occur before, during, or after a storm event.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Sometimes BBQ grills or generators are used near or inside the home during power outages, leading to carbon monoxide poisoning.

OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

OREGON ESSENCE

Oregon Health Authority

WHAT ARE YOU SEEING?

Most winter hazard-related injuries will occur during an event, during clean-up activities, or while power is being restored. As you look at these charts, compare visit counts pre- and post-event. The charts below show visit counts matching each query. See the box on the left for how to read the charts.

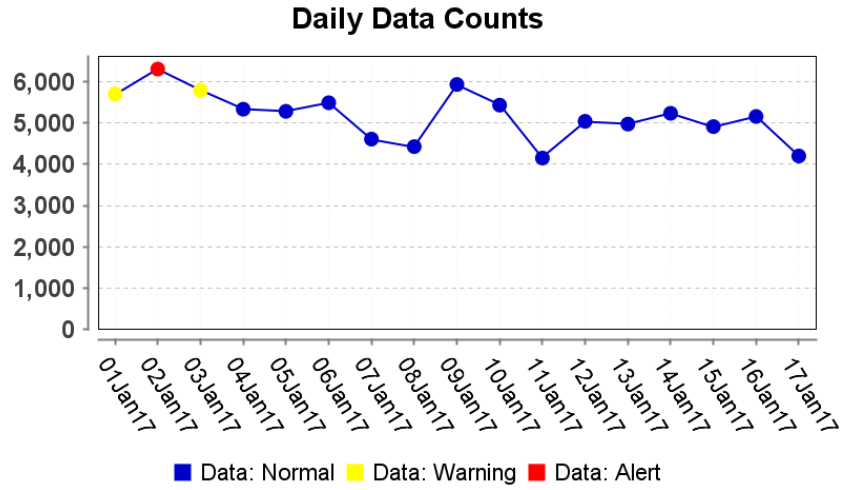
HOW TO READ THESE CHARTS

Visit counts for each day are color-coded in the charts to the right. Blue dots indicate normal visit counts, and yellow or red dots mean the counts for that day are abnormally high. We are looking for sudden or sustained increases in visits.

TOTAL VISITS QUERY includes all visits to Oregon EDs and participating urgent care facilities.

INJURY SYNDROME QUERY looks for hundreds of free text terms related to injury, including cuts, overexertion, electrocution, and motor vehicle-related accidents. Importantly, this syndrome does not look for diagnosis codes.

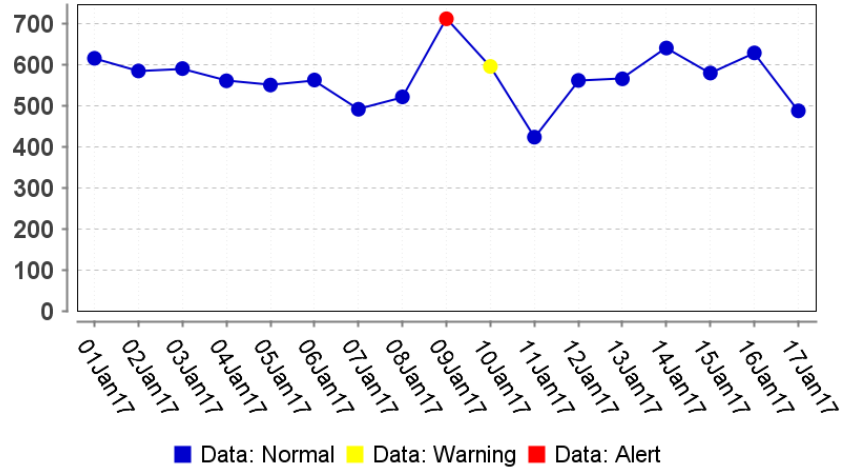
TOTAL VISITS QUERY



FINDINGS

In this chart, we see that total visits are not currently above expected levels, after being elevated during the last week of 2016 and the first week of 2017. Weather conditions may have made travel for non-life threatening complaints more challenging immediately after the storm, and patients deferred their visits or sought care elsewhere.

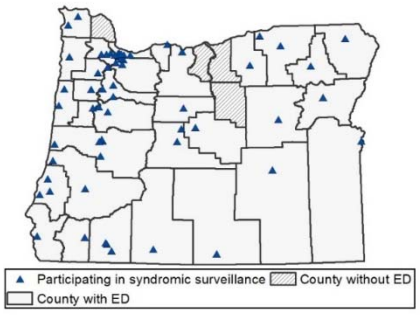
INJURY SYNDROME QUERY



FINDINGS

In this chart, we see that injury-related are not currently above expected levels. There were, however, increases above expected levels seen on January 9 and 10, before and during the most recent storm event.

SYNDROMIC COVERAGE by county is detailed in the map below.



FALL SYNDROME QUERY looks for dozens of free text terms related to falls, including slipped, tripped, and stumbled. Importantly, this sub-syndrome does not look for diagnosis codes.

CARBON MONOXIDE (CO) POISONING QUERY looks for the codes for the "toxic effect of carbon monoxide" (ICD-9 code 986 and ICD-10 code T58) and words related to CO poisoning.

SYNDROMIC SURVEILLANCE FOR PUBLIC HEALTH ACTION

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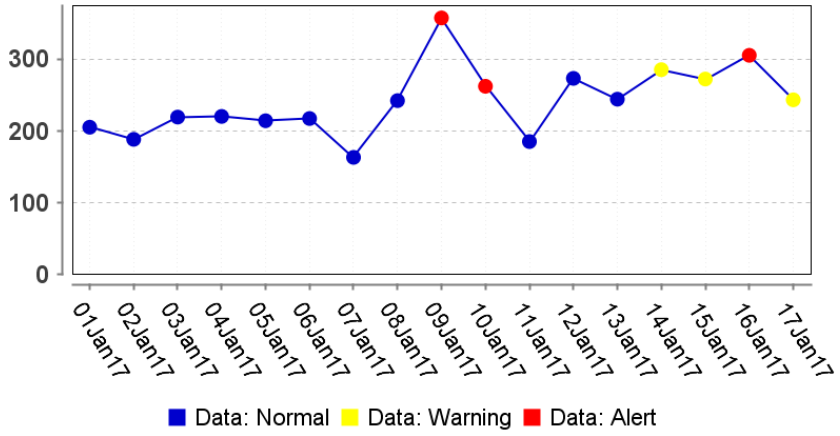
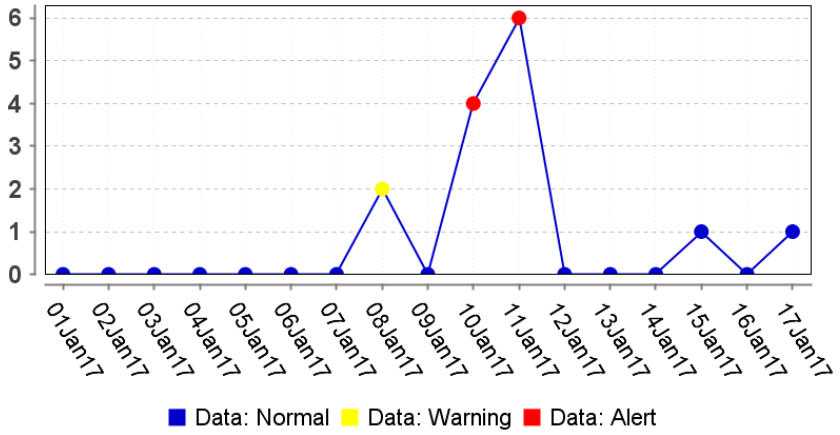
FALL SYNDROME QUERY



FINDINGS

In this chart, we see that visits falls have been higher than expected during the past week's storm event. This is a broader search than the "winter weather-related slips and falls" query. Patients often do not give a reason for a fall, such as "I fell on the ice," but fall visits appear to increase during and after storm events. Looking at this syndrome shows the magnitude of potentially weather-related injuries. As always, walking on ice is extremely dangerous.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels, but there were two clusters of exposure on January 10 and 11 and several other individual exposures related to improper heating. CO poisoning is preventable. Using generators, space heaters, and even wood fires increase CO in the air, leading to potential poisonings. If poisoning is suspected, seek fresh air and medical attention.

Oregon ESSENCE Syndromic Hazard Report

January 11, 2017

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HEALTH EFFECTS OF FALL AND WINTER HAZARDS

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- Prolonged power outages or flooding can lead to increases in stomach illness as food goes unrefrigerated or water sources change. Some infectious diseases that cause stomach illness are also more common in the winter months.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Winter weather and windstorms can cause the power to go out. Sometimes BBQ grills or generators are used near or inside the home during outages, leading to carbon monoxide poisoning.

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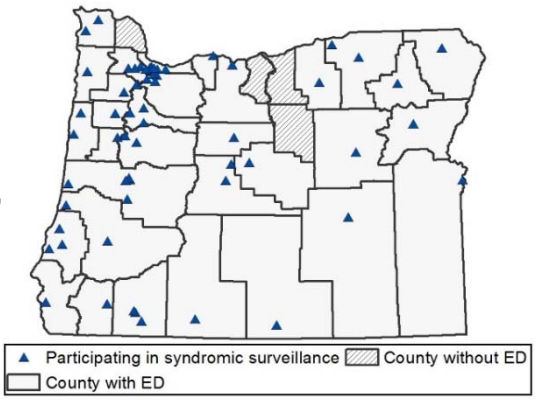

OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

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WHAT ARE YOU SEEING?

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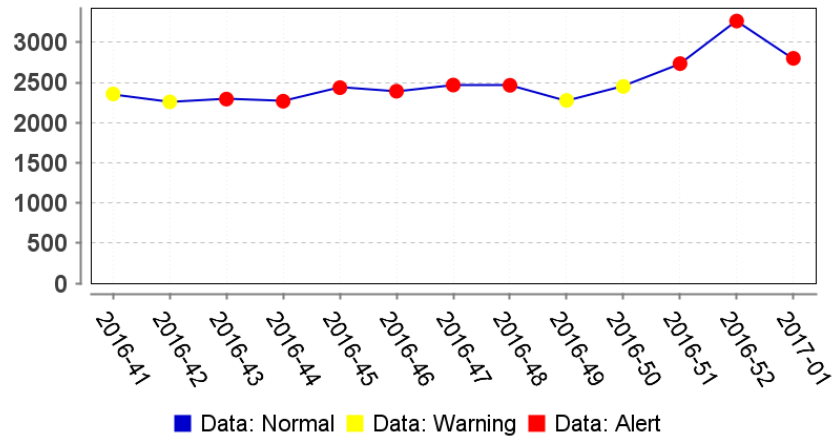
GASTROINTESTIONAL (GI) SYNDROME QUERY looks for hundreds of free text terms related to GI illness, including abdominal pain, vomiting, diarrhea, and loss of appetite. Importantly, this syndrome does not look for diagnosis codes.

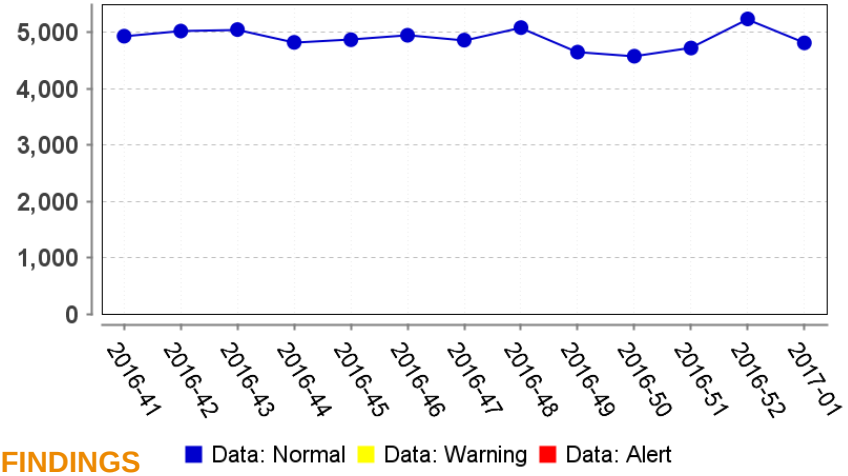
ASTHMA-LIKE QUERY



FINDINGS

In this chart, we see that visits for asthma-like complaints were at their highest level yet this season during Week 52 (December 25-31, 2016). While there were about 500 less visits statewide during Week 1 (January 1-7, 2017), there were still more than expected. Visits may normally increase due to seasonal respiratory infections, colder outdoor temperatures, and more exposure to indoor allergens, like dust, mold, and pet dander. A sudden or sustained increase in asthma-like visits could indicate an environmental event, such as a change in temperature or air quality.

GASTROINTESTIONAL (GI) SYNDROME QUERY



FINDINGS

In this chart, we see that visits for gastrointestinal (GI) complaints are not currently above expected levels. An increase in GI visits could indicate that an infectious disease is widely circulating or that after a storm, food or water supplies are affected. Post-storm, check for local boil-water advisories, and throw away food that cannot be kept cold or properly heated.

OREGON ESSENCE

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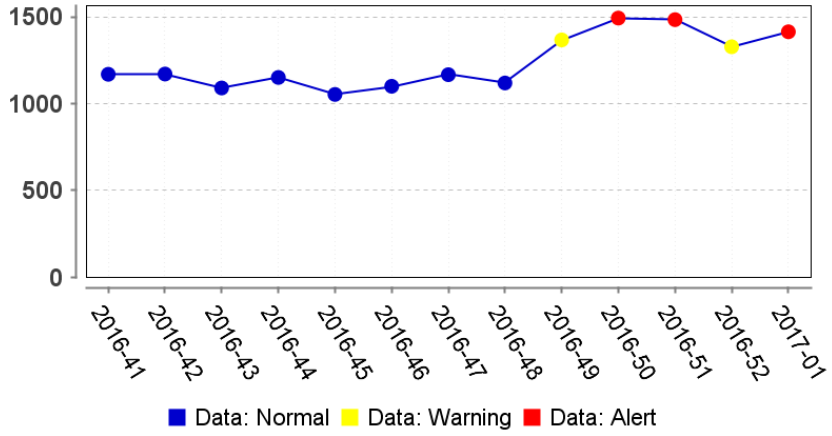
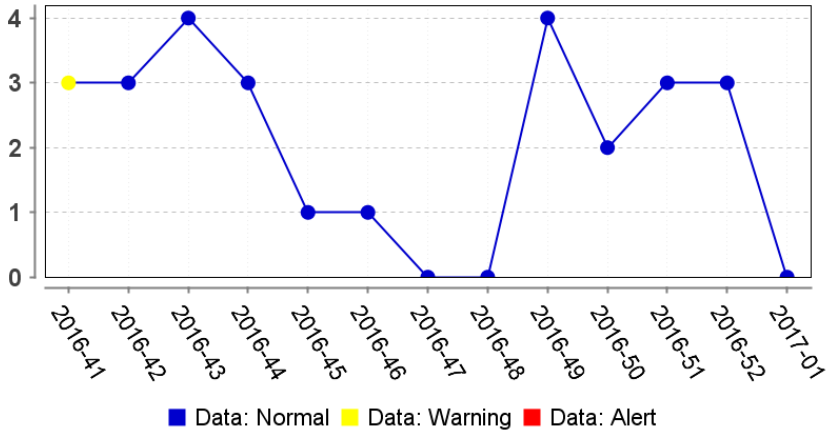
FALL SYNDROME QUERY



FINDINGS

In this chart, we see that visits falls have been increasing over the last several weeks. This is a much broader search than the "winter weather-related slips and falls" query seen in prior reports. Patients often do not give a reason for a fall, such as "I fell on the ice," but fall visits appeared to increase during and after storm events (Week 49 and 50). Looking at this syndrome shows the magnitude of *potentially* weather-related injuries. As always, walking on ice is extremely dangerous.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels. Using generators, space heaters, and even wood fires increase CO in the air, leading to potential poisonings. If poisoning is suspected, seek fresh air and medical attention. Make sure to check your CO detector regularly, or install one if you don't have one. Have your furnace inspected yearly. Only use portable generators outside, more than 20 feet away from your home, doors, and windows, and never inside your home or garage.

Oregon ESSENCE Syndromic Hazard Report

December 29, 2016

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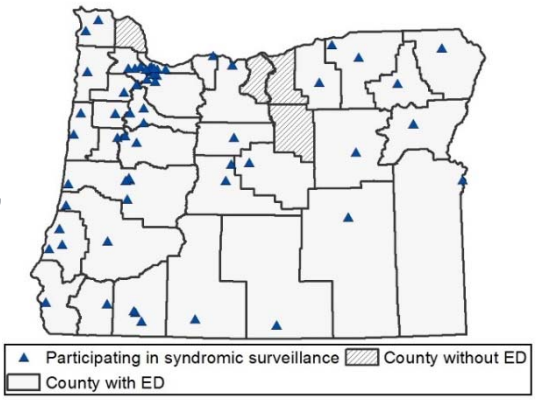

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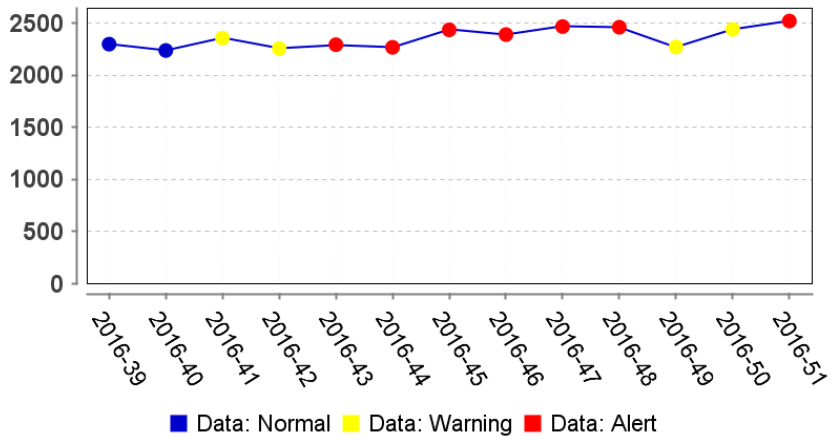
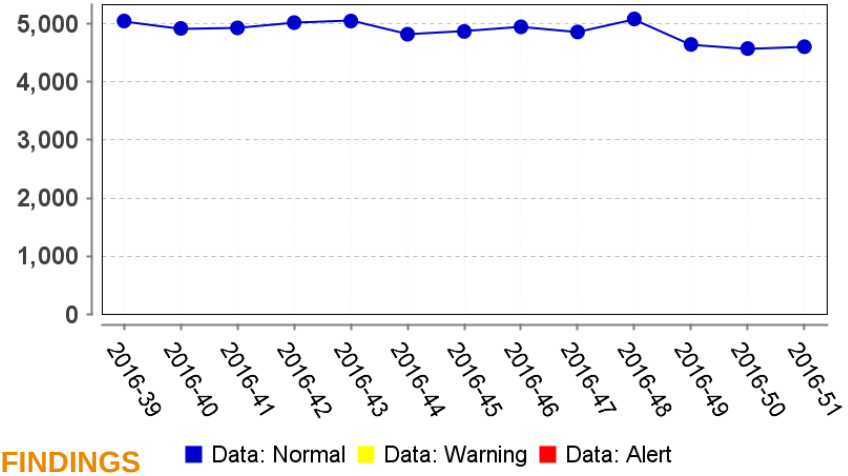
ASTHMA-LIKE QUERY



FINDINGS

In this chart, we see that visits for asthma-like complaints have been increasing over the last several weeks and are currently at their highest level yet this season. Visits may normally increase due to seasonal respiratory infections, colder outdoor temperatures, and more exposure to indoor allergens, like dust, mold, and pet dander. A sudden or sustained increase in asthma-like visits could indicate an environmental event, such as a change in temperature or air quality, such as those many regions in the state have experienced with recent winter weather.

GASTROINTESTIONAL (GI) SYNDROME QUERY



FINDINGS

In this chart, we see that visits for gastrointestinal (GI) complaints are not currently above expected levels. An increase in GI visits could indicate that an infectious disease is widely circulating or that after a storm, food or water supplies are affected. Post-storm, check for local boil-water advisories, and throw away food that cannot be kept cold or properly heated.

OREGON ESSENCE

WINTER WEATHER-RELATED SLIPS AND FALLS QUERY looks for hundreds of free text terms related to falls, plus words such as "ice" and "snow." It excludes recreational injuries. Importantly, this sub-syndrome does not look for diagnosis codes.

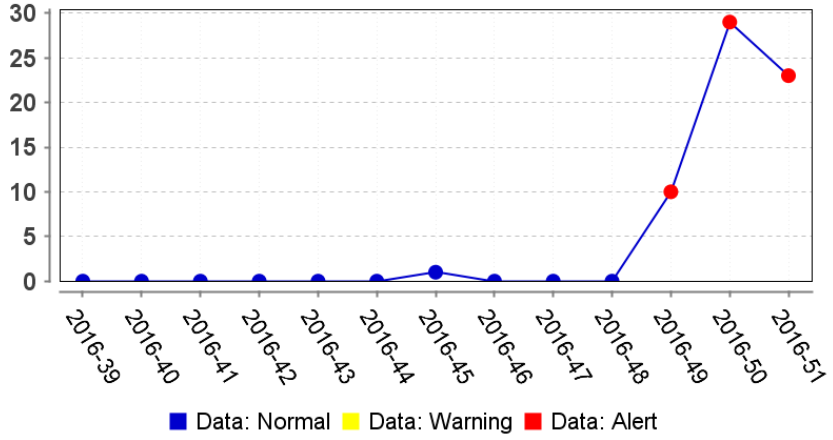
CARBON MONOXIDE (CO) POISONING QUERY looks for the codes for the "toxic effect of carbon monoxide" (ICD-9 code 986 and ICD-10 code T58) and words related to CO poisoning.

SYNDROMIC SURVEILLANCE FOR PUBLIC HEALTH ACTION

Local health departments and participating hospitals may request access to Oregon ESSENCE to produce these types of reports for their regions. Visit our website to learn more: www.healthoregon.org/essence

CRISIS AND EMERGENCY RISK COMMUNICATION TOOLKITS provide messaging for public health hazards such as Winter Weather and Flooding. Access them here: https://public.health.oregon.gov/Preparedness/Partners/Pages/riskcommunicationtools.aspx

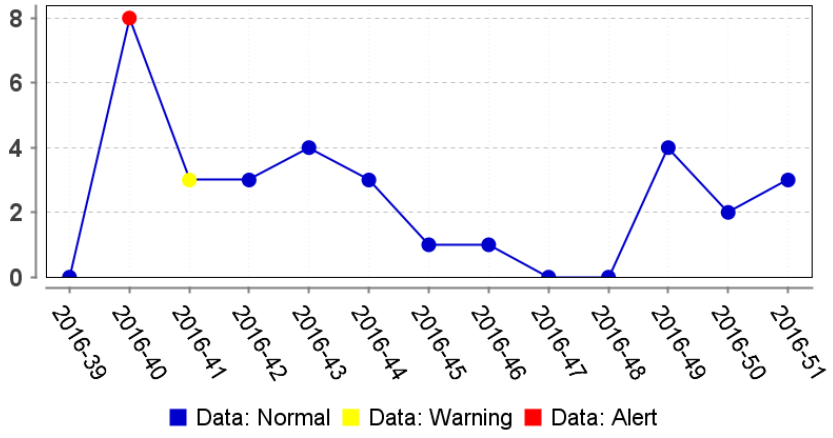
WINTER WEATHER-RELATED SLIPS AND FALLS QUERY



FINDINGS

In this chart, we see that visits for winter weather-related slips and falls peaked last week during the winter storm. Walking on ice is extremely dangerous. Many cold weather injuries result from falls on ice-covered sidewalks, steps, driveways, and porches. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand or even cat litter may also be used to reduce the risk of slipping.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels. Using generators, space heaters, and even wood fires increase CO in the air, leading to potential poisonings. If poisoning is suspected, seek fresh air and medical attention. Make sure to check your CO detector regularly, or install one if you don't have one. Have your furnace inspected yearly. Only use portable generators outside, more than 20 feet away from your home, doors, and windows, and never inside your home or garage.

Oregon ESSENCE Syndromic Hazard Report

December 15, 2016

SYNDROMIC SURVEILLANCE is the near real-time monitoring of key health indicators in emergency department (ED) visits. Oregon's syndromic surveillance project (Oregon ESSENCE) tracks the number of visits for specific patient symptoms (what the patient says when they register in the ED). We look at symptoms associated with known health effects for the season.

SIMILAR SYMPTOMS are grouped together into "syndrome" categories. For example, "wheezing" and "difficulty breathing" are grouped into the asthma-like query. By comparing the counts we see against those we would expect to see this time of year (using statistical models), we can identify any trends in visits.

EMERGENCY DEPARTMENT VISIT INFORMATION is collected from hospitals and urgent care centers across the state. Currently, 60/60 eligible hospitals are sending data every day for syndromic surveillance.

SEASONAL HAZARDS for fall and winter include air inversions, windstorms, and winter storms, which can cause extensive damage, including the loss of electricity, slippery surfaces, and flooding throughout the Pacific Northwest.

CLIMATE CHANGE AND WINTER STORMS Due to our changing climate, we expect an increase in extreme weather events including winter storms. Oregon Health Authority's Climate and Health Program is working to study and plan for the health effects of climate change in Oregon. To learn more visit www.healthoregon.org/climatechange

MONITORING Oregon ESSENCE provides key information on population health during seasonal hazard events. ESSENCE users can now reproduce these queries themselves by following instructions posted at www.healthoregon.org/essence

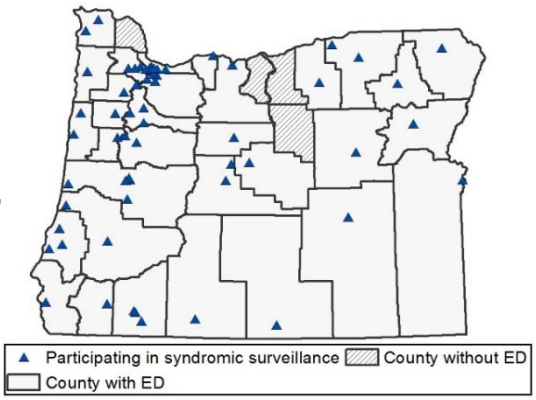
HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Air inversions or use of wood-burning stoves can lead to changes in air quality, exacerbating respiratory conditions such as asthma.
- Prolonged power outages or flooding can lead to increases in stomach illness as food goes unrefrigerated or water sources change. Some infectious diseases that cause stomach illness are also more common in the winter months.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Winter weather and windstorms can cause the power to go out. Sometimes BBQ grills or generators are used near or inside the home during outages, leading to carbon monoxide poisoning.

INSIDE THIS HAZARD REPORT you will see a snapshot of the health effects of fall and winter hazards for the state.

ESSENCE USERS can use these queries to look for regional health effects not captured in a statewide view.

SYNDROMIC COVERAGE by county is detailed in the map below.



OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

Oregon Health Authority

WHAT ARE YOU SEEING?

Most winter hazard-related injuries will occur during an event, during clean-up activities, or while power is being restored. The charts below show visit counts matching each query. See the box on the left for how to read the charts.

HOW TO READ THESE CHARTS

Visit counts for each week are color-coded in the charts to the right. Blue dots indicate normal visit counts, and yellow or red dots mean the counts for that week are abnormally high. We are looking for sudden or sustained increases in visits.

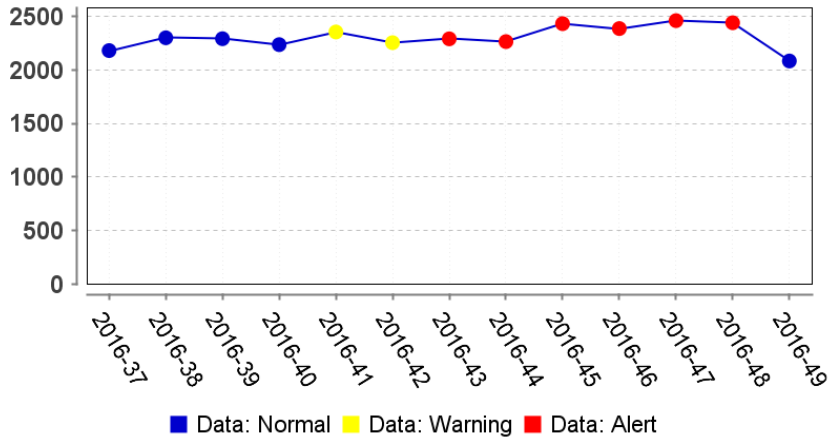
Counts are reported by CDC MMWR week, which always start on Sunday. In 2016 and 2017, this includes:

- **Week 40, October 2**
- **Week 44, October 30**
- **Week 48, November 27**
- **Week 52, December 25**
- **Week 1, January 1**
- **Week 6, February 5**
- **Week 10, March 5**
- **Week 14, April 2**

ASTHMA-LIKE QUERY looks for the codes for the "asthma" (ICD-9 code 493 and ICD-10 code J45) and words like "asthma," "wheezing," and "shortness of breath."

GASTROINTESTIONAL (GI) SYNDROME QUERY looks for hundreds of free text terms related to GI illness, including abdominal pain, vomiting, diarrhea, and loss of appetite. Importantly, this syndrome does not look for diagnosis codes.

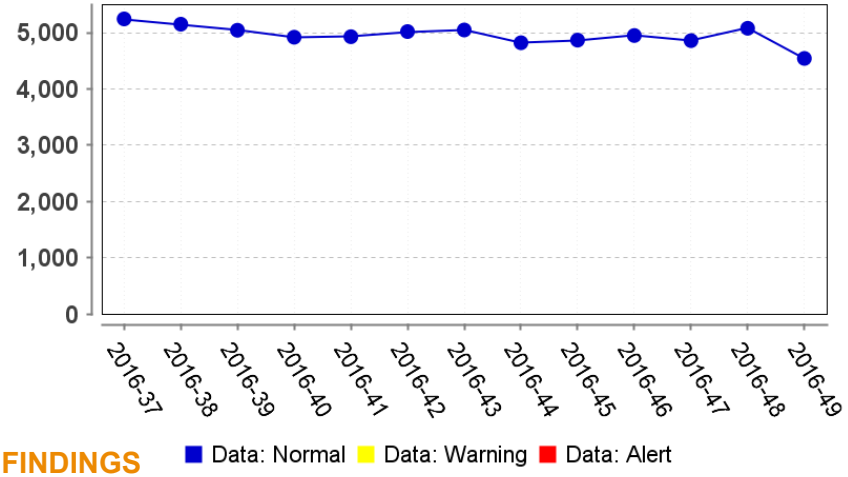
ASTHMA-LIKE QUERY



FINDINGS

In this chart, we see that visits for asthma-like complaints returned to expected levels during week 49, but this may be due to reduced visits during a winter weather event (see Issue 4). Visits may normally increase due to seasonal respiratory infections, colder outdoor temperatures, and more exposure to indoor allergens, like dust, mold, and pet dander. A sudden or sustained increase in asthma-like visits could indicate an environmental event, such as a change in temperature or air quality. Those with heart or lung problems, as well as young children, are especially vulnerable.

GASTROINTESTIONAL (GI) SYNDROME QUERY



FINDINGS

In this chart, we see that visits for gastrointestinal (GI) complaints are not currently above expected levels. An increase in GI visits could indicate that an infectious disease is widely circulating or that after a storm, food or water supplies are affected. Post-storm, check for local boil-water advisories, and throw away food that cannot be kept cold or properly heated.

OREGON ESSENCE

Oregon Health Authority

WINTER WEATHER-RELATED SLIPS AND FALLS QUERY looks for hundreds of free text terms related to falls, plus words such as "ice" and "snow." It excludes recreational injuries. Importantly, this sub-syndrome does not look for diagnosis codes.

CARBON MONOXIDE (CO) POISONING QUERY looks for the codes for the "toxic effect of carbon monoxide" (ICD-9 code 986 and ICD-10 code T58) and words related to CO poisoning.

SYNDROMIC SURVEILLANCE FOR PUBLIC HEALTH ACTION

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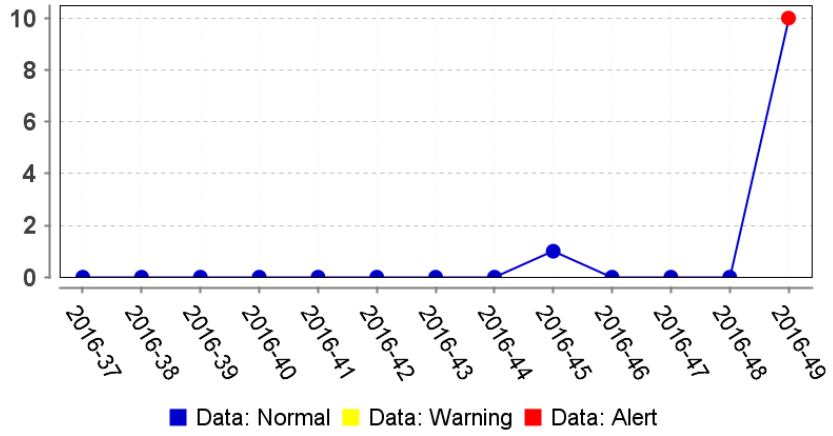
OREGON ESSENCE

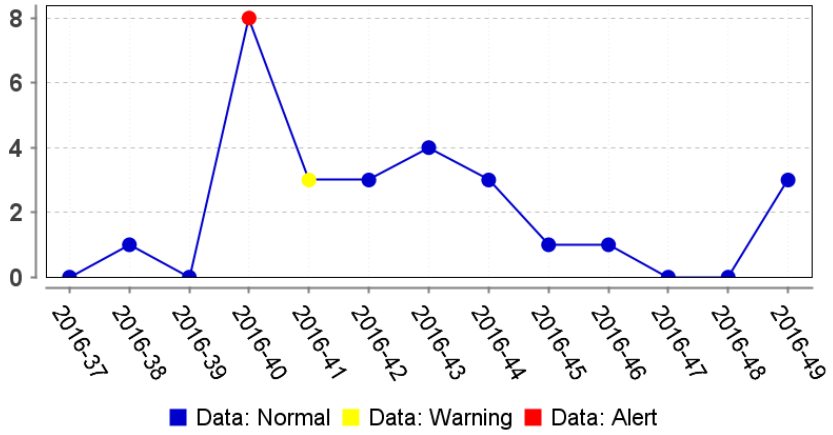
WINTER WEATHER-RELATED SLIPS AND FALLS QUERY



FINDINGS

In this chart, we see that visits for winter weather-related slips and falls rose above expected levels during Week 49, which included the first large storm event of the season. Walking on ice is extremely dangerous. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand or even cat litter may also be used to reduce the risk of slipping.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels. There were several clusters of CO poisoning related to the use of gas-powered equipment during Week 40. Such exposure is preventable. If poisoning is suspected, seek fresh air and medical attention. Make sure to check your CO detector regularly, or install one if you don't have one. Have your furnace inspected yearly. Only use portable generators outside, more than 20 feet away from your home, doors, and windows, and never inside.

Oregon ESSENCE Syndromic Hazard Report

December 12, 2016

SYNDROMIC SURVEILLANCE is the near real-time monitoring of key health indicators in emergency department (ED) visits. Oregon's syndromic surveillance project (Oregon ESSENCE) tracks the number of visits for specific patient symptoms (what the patient says when they register in the ED). We look at symptoms associated with known health effects for the season.

SIMILAR SYMPTOMS are grouped together into "syndrome" categories. For example, "wheezing" and "difficulty breathing" are grouped into the asthma-like query. By comparing the counts we see against those we would expect to see this time of year (using statistical models), we can identify any trends in visits.

EMERGENCY DEPARTMENT VISIT INFORMATION is collected from hospitals and urgent care centers across the state. Currently, 60/60 eligible hospitals are sending data every day for syndromic surveillance.

SEASONAL HAZARDS for fall and winter include air inversions, windstorms, and winter storms, which can cause extensive damage, including the loss of electricity, slippery surfaces, and flooding throughout the Pacific Northwest.

MONITORING Oregon ESSENCE provides key information on population health during seasonal hazard events. ESSENCE users can now reproduce these queries themselves by following instructions posted at www.healthoregon.org/essence

EVENT: December 8-11, 2016

The National Weather Service issued advisories and watches for an "unusually strong" winter storm that included a mix of freezing rain and snow in the Portland Metro area and larger snow accumulations in Central and Eastern Oregon.

This special report includes daily counts of ED and urgent care visits in Oregon, including injuries, winter weather-related slips and falls, and carbon monoxide poisonings, for **December 1-11**. As clean-up continues and as we prepare for future winter storms, these and other weather-related health outcomes will continue to be monitored. It is important to note that daily visit counts may be unstable. A warning or alert does not necessarily indicate an event of public health significance.

HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Injuries can occur before, during, or after a storm event.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Sometimes BBQ grills or generators are used near or inside the home during power outages, leading to carbon monoxide poisoning.

OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

OREGON ESSENCE

Oregon Health Authority

WHAT ARE YOU SEEING?

Most winter hazard-related injuries will occur during an event, during clean-up activities, or while power is being restored. As you look at these charts, compare visit counts pre- and post-event. The charts below show visit counts matching each query. See the box on the left for how to read the charts.

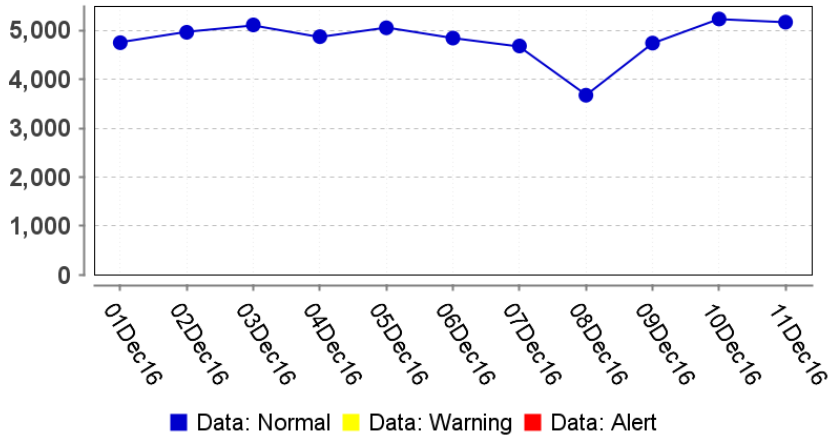
HOW TO READ THESE CHARTS

Visit counts for each day are color-coded in the charts to the right. Blue dots indicate normal visit counts, and yellow or red dots mean the counts for that day are abnormally high. We are looking for sudden or sustained increases in visits.

TOTAL VISITS QUERY includes all visits to Oregon EDs and participating urgent care facilities.

INJURY SYNDROME QUERY looks for hundreds of free text terms related to injury, including cuts, overexertion, electrocution, and motor vehicle-related accidents. Importantly, this syndrome does not look for diagnosis codes.

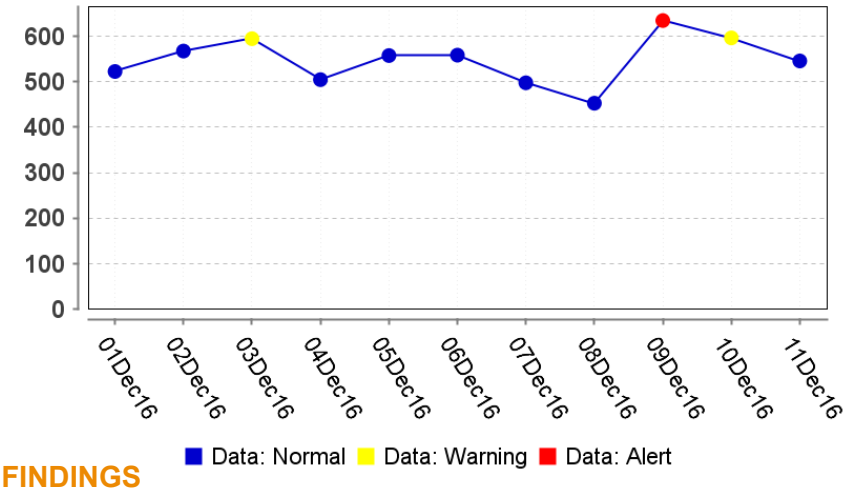
TOTAL VISITS QUERY



FINDINGS

In this chart, we see that total visits are not currently above expected levels. However, on the day of the largest storm impact, December 8, there was a decrease in total visits similar in magnitude to decreases seen on holidays. Weather conditions may have made travel for non-life threatening complaints more challenging, so patients deferred their visits or sought care elsewhere.

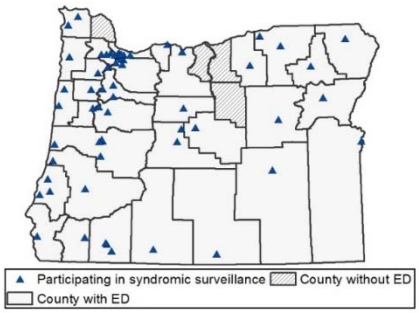
INJURY SYNDROME QUERY



FINDINGS

In this chart, we see that injury-related visits rose above expected levels on December 9 and 10. The most common types of visits on these two days were for falls (see below), cuts, and motor vehicle-related complaints, which are consistent with injury visits seen statewide in December 2015 and 2016.

SYNDROMIC COVERAGE by county is detailed in the map below.



Oregon Health Authority

WINTER WEATHER-RELATED SLIPS AND FALLS QUERY looks for hundreds of free text terms related to falls, plus words such as "ice" and "snow." It excludes recreational injuries. Importantly, this sub-syndrome does not look for diagnosis codes.

CARBON MONOXIDE (CO) POISONING QUERY looks for the codes for the "toxic effect of carbon monoxide" (ICD-9 code 986 and ICD-10 code T58) and words related to CO poisoning.

SYNDROMIC SURVEILLANCE FOR PUBLIC HEALTH ACTION

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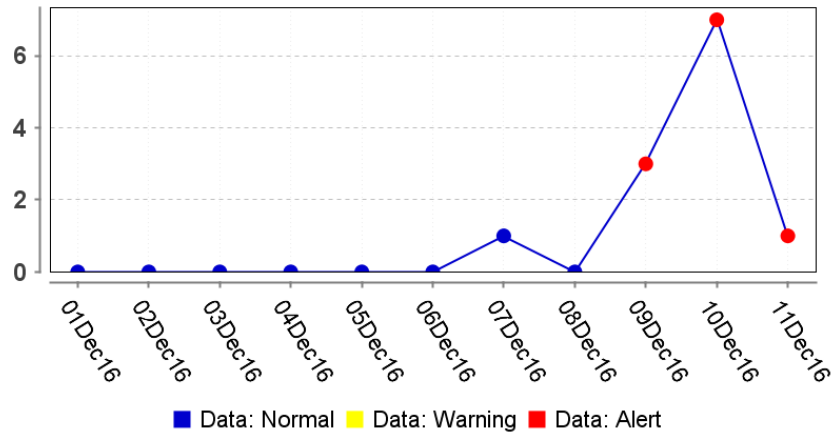
OREGON ESSENCE

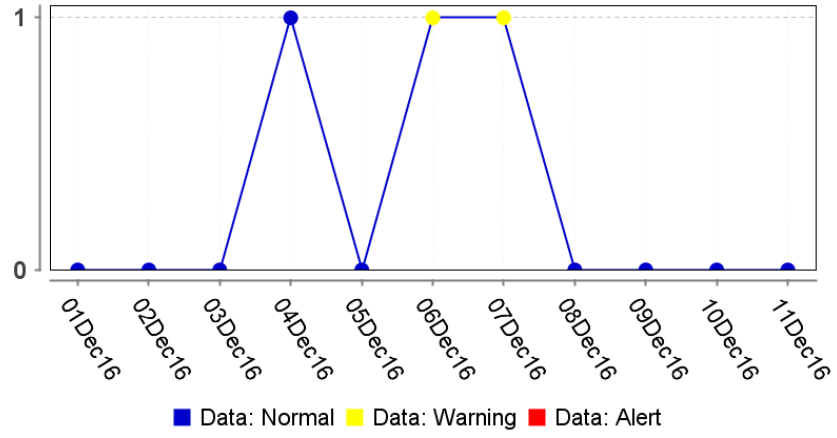
WINTER WEATHER-RELATED SLIPS AND FALLS QUERY



FINDINGS

In this chart, we see that visits for winter weather-related slips and falls were above expected levels on December 9 to 11. Walking on ice is extremely dangerous. Many cold weather injuries result from falls on ice-covered sidewalks, steps, driveways, and porches. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand or even cat litter may also be used to reduce the risk of slipping.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels. Before the storm, there were three, unrelated exposure-related visits. CO poisoning is preventable. Using generators, space heaters, and even wood fires increase CO in the air, leading to potential poisonings. If poisoning is suspected, seek fresh air and medical attention.

Oregon ESSENCE Syndromic Hazard Report

December 1, 2016

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SIMILAR SYMPTOMS are grouped together into "syndrome" categories. For example, "wheezing" and "difficulty breathing" are grouped into the asthma-like query. By comparing the counts we see against those we would expect to see this time of year (using statistical models), we can identify any trends in visits.

EMERGENCY DEPARTMENT VISIT INFORMATION is collected from hospitals and urgent care centers across the state. Currently, 60/60 eligible hospitals are sending data every day for syndromic surveillance.

SEASONAL HAZARDS for fall and winter include air inversions, windstorms, and winter storms, which can cause extensive damage, including the loss of electricity, slippery surfaces, and flooding throughout the Pacific Northwest.

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OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

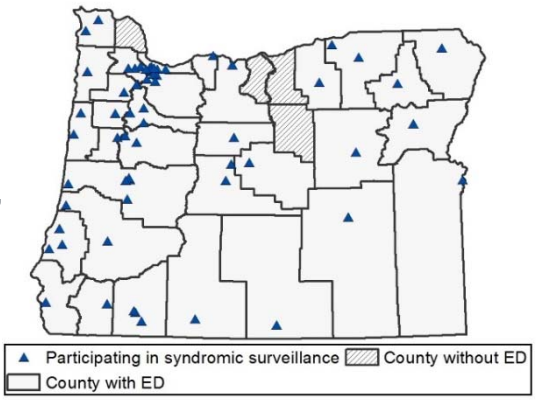
HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Air inversions or use of wood-burning stoves can lead to changes in air quality, exacerbating respiratory conditions such as asthma.
- Prolonged power outages or flooding can lead to increases in stomach illness as food goes unrefrigerated or water sources change. Some infectious diseases that cause stomach illness are also more common in the winter months.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Winter weather and windstorms can cause the power to go out. Sometimes BBQ grills or generators are used near or inside the home during outages, leading to carbon monoxide poisoning.

INSIDE THIS HAZARD REPORT you will see a snapshot of the health effects of fall and winter hazards for the state.

ESSENCE USERS can use these queries to look for regional health effects not captured in a statewide view.

SYNDROMIC COVERAGE by county is detailed in the map below.



OREGON ESSENCE

Oregon Health Authority

WHAT ARE YOU SEEING?

Most winter hazard-related injuries will occur during an event, during clean-up activities, or while power is being restored. The charts below show visit counts matching each query. See the box on the left for how to read the charts.

HOW TO READ THESE CHARTS

Visit counts for each week are color-coded in the charts to the right. Blue dots indicate normal visit counts, and yellow or red dots mean the counts for that week are abnormally high. We are looking for sudden or sustained increases in visits.

Counts are reported by CDC MMWR week, which always start on Sunday. In 2016 and 2017, this includes:

- **Week 40, October 2**
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- **Week 48, November 27**
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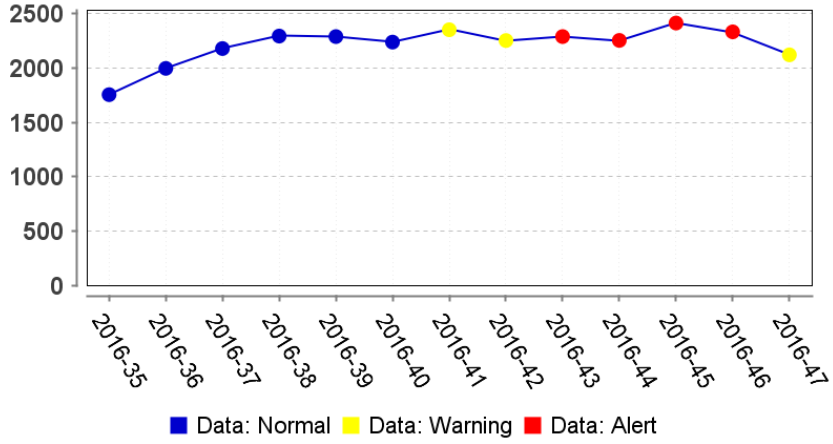
- **Week 1, January 1**
- **Week 6, February 5**
- **Week 10, March 5**
- **Week 14, April 2**

ASTHMA-LIKE QUERY looks for the codes for the "asthma" (ICD-9 code 493 and ICD-10 code J45) and words like "asthma," "wheezing," and "shortness of breath."

GASTROINTESTIONAL (GI) SYNDROME QUERY looks for hundreds of free text terms related to GI illness, including abdominal pain, vomiting, diarrhea, and loss of appetite. Importantly, this syndrome does not look for diagnosis codes.

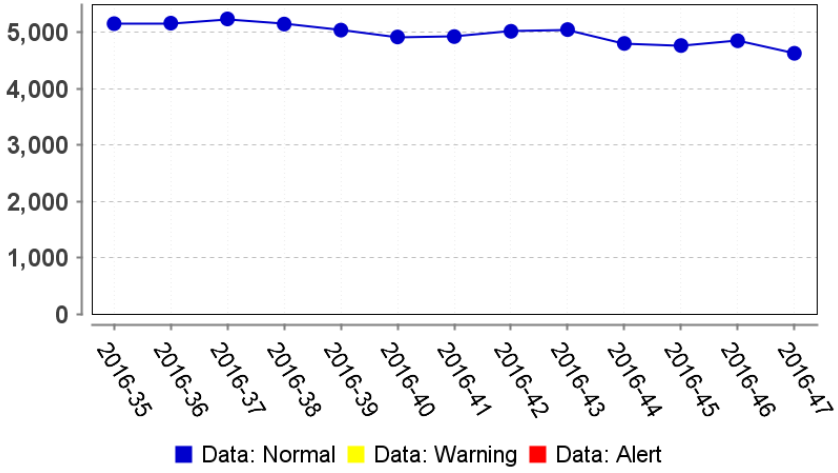
ASTHMA-LIKE QUERY



FINDINGS

In this chart, we see that overall, visits for asthma-like complaints have been elevated since mid-October. More women than men are seen for asthma-like complaints, but visits for both groups are currently higher than expected. Increased visit were first seen in school-aged children (ages 5-17) in mid-September. In the past few weeks, increased visits have been seen in the very young (ages 0-4) and older adults (ages 65+). Visits may normally increase due to seasonal respiratory infections, colder outdoor temperatures, and more exposure to indoor allergens, like dust, mold, and pet dander.

GASTROINTESTIONAL (GI) SYNDROME QUERY



FINDINGS

In this chart, we see that visits for gastrointestinal (GI) complaints are not currently above expected levels. This pattern is consistent regionally, by age, and by sex statewide. An increase in GI visits could indicate that an infectious disease is widely circulating or that after a storm, food or water supplies are affected.

OREGON ESSENCE

Oregon Health Authority

WINTER WEATHER-RELATED SLIPS AND FALLS QUERY looks for hundreds of free text terms related to falls, plus words such as "ice" and "snow." It excludes recreational injuries. Importantly, this sub-syndrome does not look for diagnosis codes.

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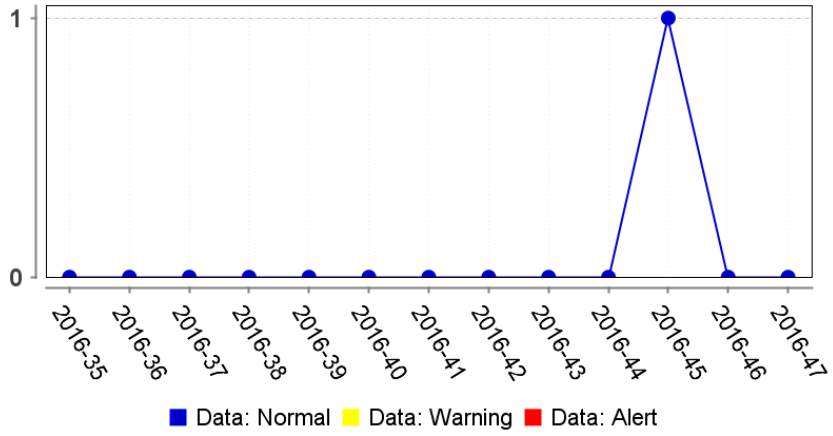
OREGON ESSENCE

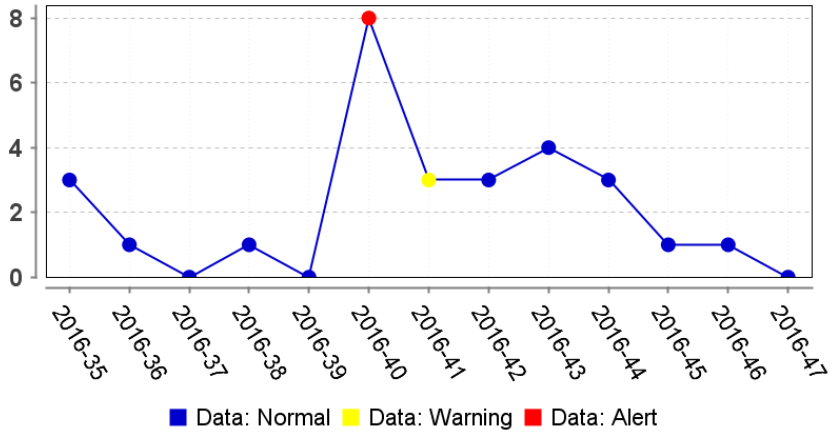
WINTER WEATHER-RELATED SLIPS AND FALLS QUERY



FINDINGS

In this chart, we see that visits for winter weather-related slips and falls are not currently above expected levels. Walking on ice is extremely dangerous. Many cold weather injuries result from falls on ice-covered sidewalks, steps, driveways, and porches. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand or even cat litter may also be used to reduce the risk of slipping.

CARBON MONOXIDE (CO) POISONING QUERY



FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels. There were several clusters of CO poisoning related to the use of gas-powered equipment during Week 40. Such exposure is preventable. If poisoning is suspected, seek fresh air and medical attention. Make sure to check your CO detector regularly, or install one if you don't have one. Have your furnace inspected yearly. Only use portable generators outside, more than 20 feet away from your home, doors, and windows, and never inside.

Oregon ESSENCE Syndromic Hazard Report

November 17, 2016

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OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Air inversions or use of wood-burning stoves can lead to changes in air quality, exacerbating respiratory conditions such as asthma.
- Prolonged power outages or flooding can lead to increases in stomach illness as food goes unrefrigerated or water sources change. Some infectious diseases that cause stomach illness are also more common in the winter months.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Winter weather and windstorms can cause the power to go out. Sometimes BBQ grills or generators are used near or inside the home during outages, leading to carbon monoxide poisoning.

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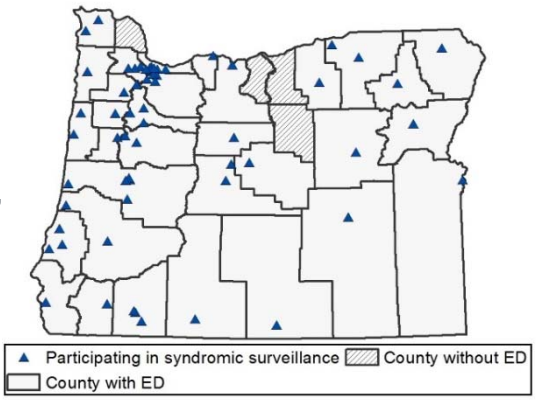

OREGON ESSENCE

Oregon Health Authority

WHAT ARE YOU SEEING?

Most winter hazard-related injuries will occur during an event, during clean-up activities, or while power is being restored. The charts below show visit counts matching each query. See the box on the left for how to read the charts.

HOW TO READ THESE CHARTS

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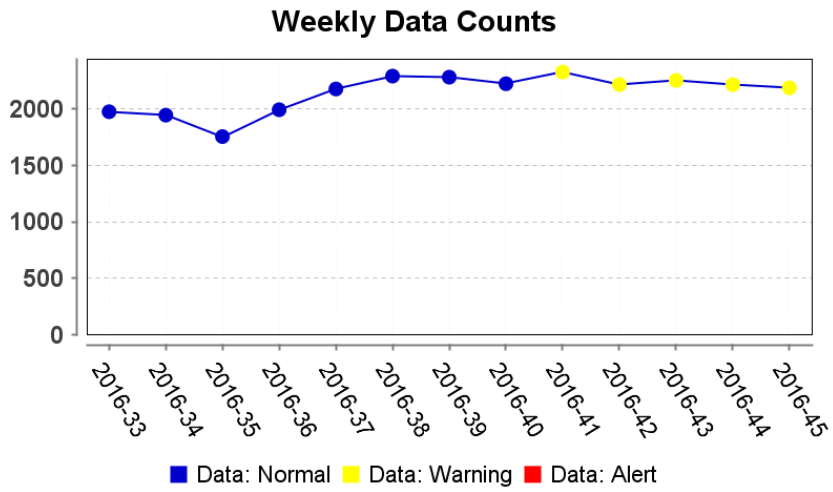
ASTHMA-LIKE QUERY looks for the codes for the "asthma" (ICD-9 code 493 and ICD-10 code J45) and words like "asthma," "wheezing," and "shortness of breath."

GASTROINTESTIONAL (GI) SYNDROME QUERY looks for hundreds of free text terms related to GI illness, including abdominal pain, vomiting, diarrhea, and loss of appetite. Importantly, this syndrome does not look for diagnosis codes.

ASTHMA-LIKE QUERY



FINDINGS

In this chart, we see that visits for asthma-like complaints have been elevated since mid-October. Visits may normally increase due to seasonal respiratory infections, colder outdoor temperatures, and more exposure to indoor allergens, like dust, mold, and pet dander. A sudden or sustained increase in asthma-like visits could indicate an environmental event, such as a change in temperature or air quality. Those with heart or lung problems, as well as young children, are especially vulnerable.

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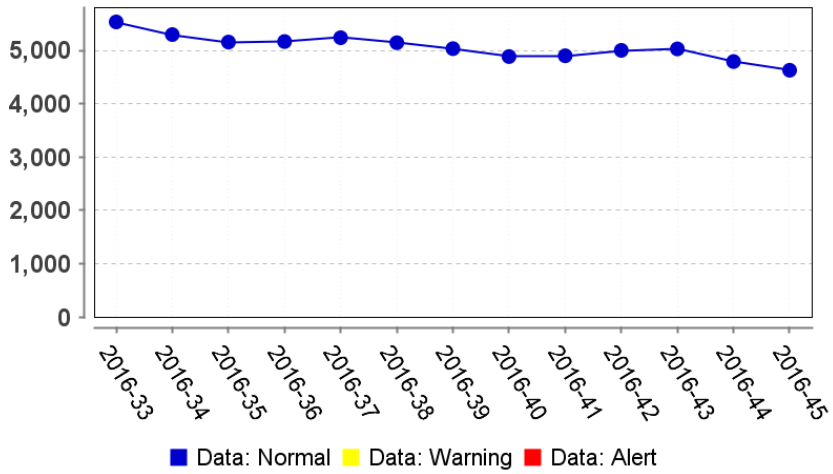

FINDINGS

In this chart, we see that visits for gastrointestinal (GI) complaints are not currently above expected levels. An increase in GI visits could indicate that an infectious disease is widely circulating or that after a storm, food or water supplies are affected. Post-storm, check for local boil-water advisories, and throw away food that cannot be kept cold or properly heated.

OREGON ESSENCE

Oregon Health Authority

WINTER WEATHER-RELATED SLIPS AND FALLS QUERY looks for hundreds of free text terms related to falls, plus words such as "ice" and "snow." It excludes recreational injuries. Importantly, this sub-syndrome does not look for diagnosis codes.

CARBON MONOXIDE (CO) POISONING QUERY looks for the codes for the "toxic effect of carbon monoxide" (ICD-9 code 986 and ICD-10 code T58) and words related to CO poisoning.

SYNDROMIC SURVEILLANCE FOR PUBLIC HEALTH ACTION

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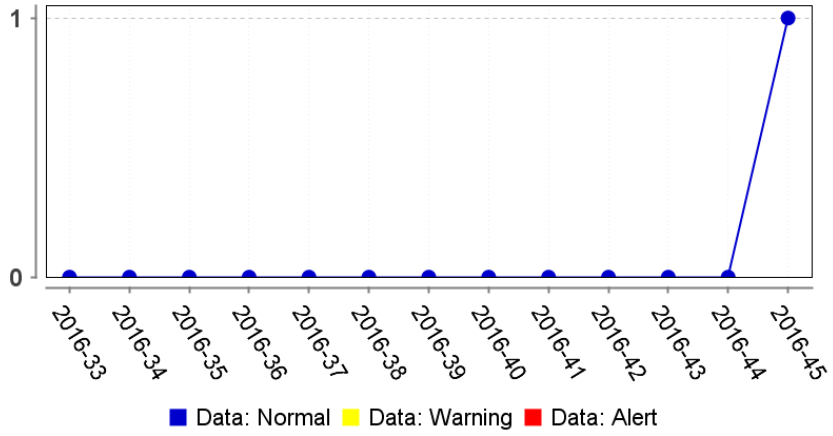
OREGON ESSENCE

WINTER WEATHER-RELATED SLIPS AND FALLS QUERY



FINDINGS

In this chart, we see that visits for winter weather-related slips and falls are not currently above expected levels. Walking on ice is extremely dangerous. Many cold weather injuries result from falls on ice-covered sidewalks, steps, driveways, and porches. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand or even cat litter may also be used to reduce the risk of slipping.

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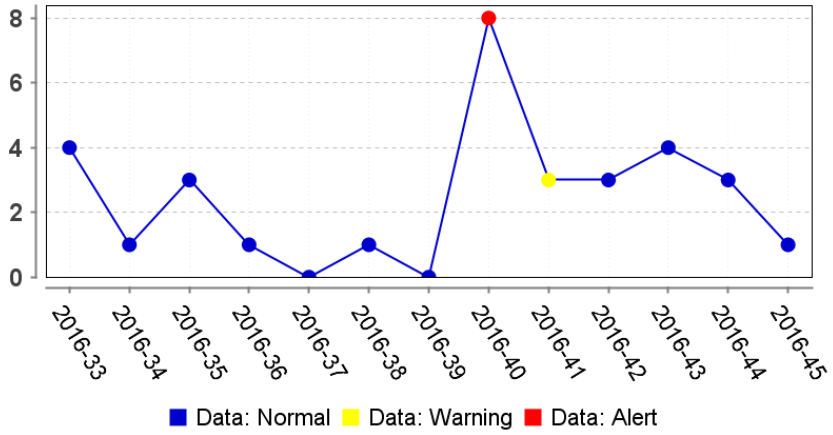


FINDINGS

In this chart, we see that visits for carbon monoxide poisoning are not currently above expected levels. There were several clusters of CO poisoning related to the use of gas-powered equipment during Week 40. Such exposure is preventable. If poisoning is suspected, seek fresh air and medical attention. Make sure to check your CO detector regularly, or install one if you don't have one. Have your furnace inspected yearly. Only use portable generators outside, more than 20 feet away from your home, doors, and windows, and never inside.

Oregon ESSENCE Syndromic Hazard Report

November 3, 2016

SYNDROMIC SURVEILLANCE is the near real-time monitoring of key health indicators in emergency department (ED) visits. Oregon's syndromic surveillance project (Oregon ESSENCE) tracks the number of visits for specific patient symptoms (what the patient says when they register in the ED). We look at symptoms associated with known health effects for the season.

SIMILAR SYMPTOMS are grouped together into "syndrome" categories. For example, "wheezing" and "difficulty breathing" are grouped into the asthma-like query. By comparing the counts we see against those we would expect to see this time of year (using statistical models), we can identify any trends in visits.

EMERGENCY DEPARTMENT VISIT INFORMATION is collected from hospitals and urgent care centers across the state. Currently, 60/60 eligible hospitals are sending data every day for syndromic surveillance.

SEASONAL HAZARDS for fall and winter include air inversions, windstorms, and winter storms, which can cause extensive damage, including the loss of electricity, slippery surfaces, and flooding throughout the Pacific Northwest.

MONITORING Oregon ESSENCE provides key information on population health during seasonal hazard events. ESSENCE users can now reproduce these queries themselves by following instructions posted at www.healthoregon.org/essence

OREGON PUBLIC HEALTH DIVISION
Acute & Communicable Disease Prevention
Injury & Violence Prevention

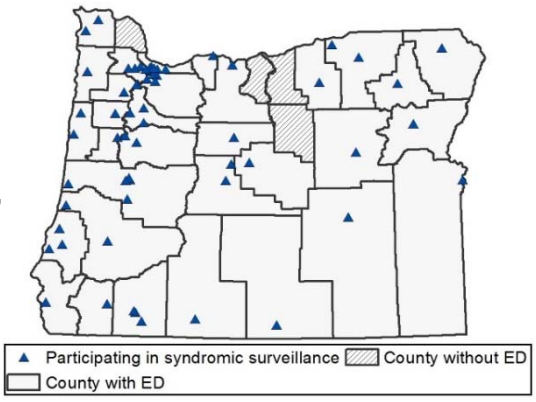
HEALTH EFFECTS OF FALL AND WINTER HAZARDS

- Air inversions or use of wood-burning stoves can lead to changes in air quality, exacerbating respiratory conditions such as asthma.
- Prolonged power outages or flooding can lead to increases in stomach illness as food goes unrefrigerated or water sources change. Some infectious diseases that cause stomach illness are also more common in the winter months.
- Winter weather may create slippery surfaces, leading to slips, trips, or falls.
- Winter weather and windstorms can cause the power to go out. Sometimes BBQ grills or generators are used near or inside the home during outages, leading to carbon monoxide poisoning.

INSIDE THIS HAZARD REPORT you will see a snapshot of the health effects of fall and winter hazards for the state.

ESSENCE USERS can use these queries to look for regional health effects not captured in a statewide view.

SYNDROMIC COVERAGE by county is detailed in the map below.



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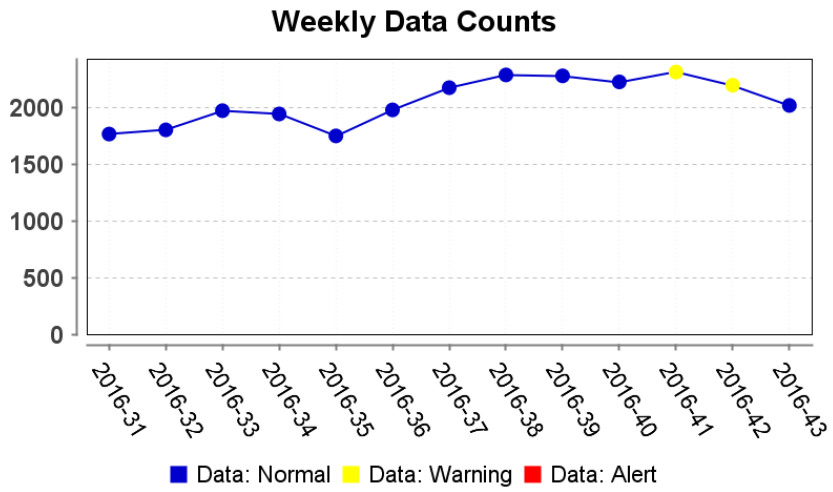

FINDINGS

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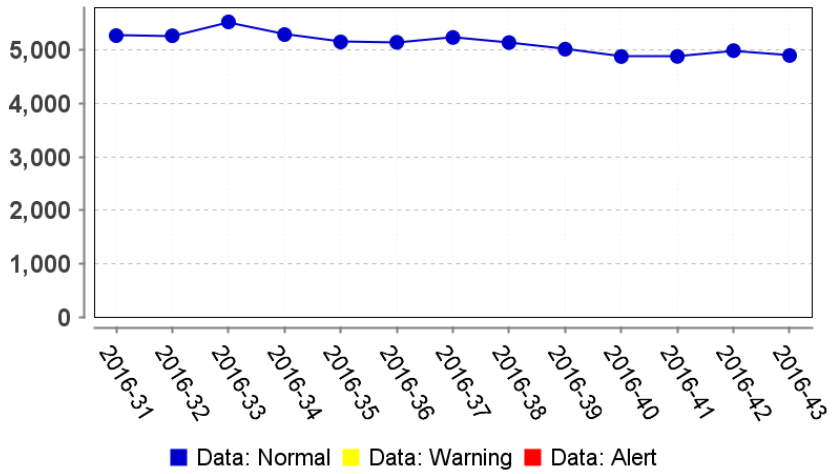

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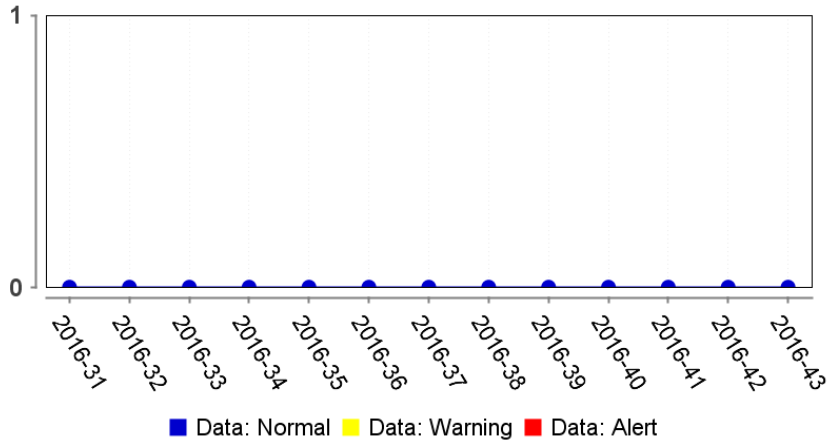

FINDINGS

In this chart, we see that there have been no visits for winter weather-related slips and falls so far this season. Walking on ice is extremely dangerous. Many cold weather injuries result from falls on ice-covered sidewalks, steps, driveways, and porches. Keep your steps and walkways as free of ice as possible by using rock salt or another chemical de-icing compound. Sand or even cat litter may also be used to reduce the risk of slipping.

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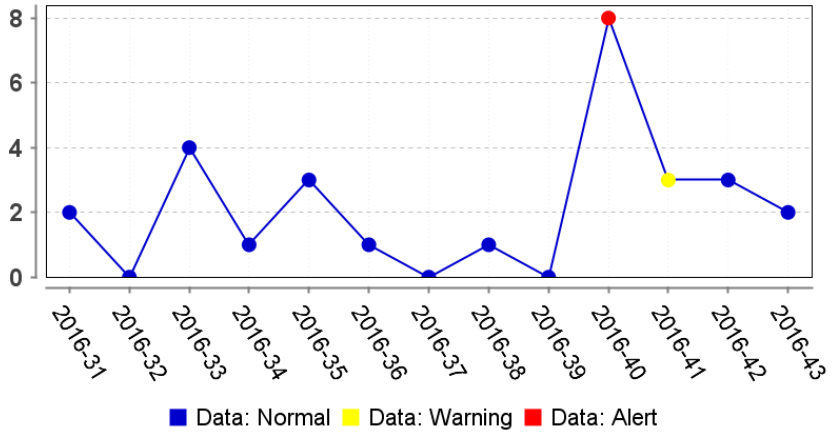

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