“Red Flags” in Common Medical Conditions, Part 2

Presented by UIC College of Nursing
Carla M. Tozer, DNP, APN/CNP
Purpose and Objectives

Background

Systems:
- Cardiovascular (conclusion)
  - Stroke
- Respiratory
  - COPD and Asthma
  - Pneumonia
- Infectious Disease
  - Influenza

Conclusion

References/Resources
Purpose:

1. Present the “red flags” for common medical conditions found amongst participants in the Money Follows the Person program.
2. Increase the knowledge and skills of non-medical Transition Coordinators or Care Managers in order to educate participants and intervene early.

Objectives:

1. Identify three “red flags” associated with chronic health conditions commonly found in participants of the Money Follows the Person program.
2. Describe two interventions that a Transition Coordinator should implement following identification of a “red flag.”
3. Discuss ways to enhance participants self-management of chronic health conditions and minimize the occurrence of “red flags.”
Chronic diseases and conditions—such as heart disease, stroke, cancer, diabetes, obesity, and arthritis—are among the most common, costly, and preventable of all health problems. (CDC, 2015)
Number of deaths for leading causes of death, 2010:

- **Heart disease**: 611,105 .........................................................Chronic
- **Cancer**: 584,881 ........................................................................Chronic
- **Chronic lower respiratory diseases**: 149,205 ................................Chronic
- **Accidents** (unintentional injuries): 130,557
- **Stroke**: 128,978 ........................................................................Chronic
- **Alzheimer's disease**: 84,767 .......................................................Chronic
- **Diabetes**: 75,578 ........................................................................Chronic
- **Influenza and Pneumonia**: 56,979
- **Nephritis, nephrotic syndrome, and nephrosis**: 47,112 ...........Chronic
- **Intentional self-harm** (suicide): 41,149

(CDC, 2013)
Number of deaths for leading causes of death, 2010:

- Heart Disease: 611,105
- Cancer: 584,88
- **Chronic lower respiratory diseases: 149,205**
- Accidents (unintentional injuries): 130,557
- **Stroke (cerebrovascular diseases): 128,978**
- Alzheimer's disease: 84,767
- Diabetes: 75,578
- Influenza and Pneumonia: 56,979
- Nephritis, nephrotic syndrome, and nephrosis: 47,112
- Intentional self-harm (suicide): 41,149

48% and 52% (CDC, 2013)
Background

Top 10 Causes of Disability among US Adults

- Arthritis or rheumatism: 8.6 million
- Back or spine problems: 7.6 million
- Heart trouble: 3.0 million
- Lung or respiratory problem: 2.2 million
- Mental or emotional problem: 2.2 million
- Diabetes: 2.0 million
- Deafness or hearing problem: 1.9 million
- Stiffness or deformity of limbs/extremities: 1.6 million
- Blindness or vision problems: 1.5 million
- Stroke: 1.1 million

(Number in millions among 47.5 million Americans reporting a disability)

(Hootman, et al, 2009)
Example:

Cardiovascular Disease

- About half of US adults (47%) have at least one of the following major risk factors for heart disease or stroke:
  - Uncontrolled high blood pressure
  - Uncontrolled high LDL cholesterol
  - Current smokers

- Ninety percent (90%) of Americans consume too much sodium, increasing their risk of high blood pressure.

(Cogswell, 2012) (Fryer, 2012)
Example

- Stroke

- Risk factors: Uncontrolled high blood pressure, high cholesterol and smoking.

- 49% of Americans have at least one of these risk factors.

(CDC, 2012)
Background

MFP TRANSITIONED PARTICIPANTS

- Depression 57%
- Diabetes 54%
- COPD 36%
- Heart Failure 28%
- Kidney Disease 24%

DISENROLLED PARTICIPANTS: DEATH OR REINSTITUTIONALIZATION

- Heart Failure
- COPD
- Diabetes
- Dementia; Alzheimer’s Dementia
- Chronic Pain Management with opioids/narcotics

(Shelton, 2015)
### Participant Characteristics Associated with Mortality, Decreased Likelihood of Living in the Community for 365 Days, and Re-Institutionalization

(Shelton, 2015)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mortality</th>
<th>Decreased Sustained Community Reintegration (365+ Days)</th>
<th>Re-Institutionalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>65+ years of age at transition</td>
<td>65+ years of age at transition</td>
<td>75+ years of age at transition</td>
<td></td>
</tr>
<tr>
<td>Any Hospital Admission after transition</td>
<td>Any ED visit, Hospital Admission or Short-Term Institutional Admission after transition</td>
<td>2+ Hospital Admissions after transition</td>
<td></td>
</tr>
<tr>
<td>CHF, COPD, and Diabetes</td>
<td>CHF, COPD, and Diabetes</td>
<td></td>
<td>Any Psychiatric Hospitalization after transition</td>
</tr>
<tr>
<td>Alzheimer’s Disease/Dementia</td>
<td>History of Alcohol Dependence</td>
<td></td>
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</tr>
<tr>
<td>Chronic Pain</td>
<td>Taking 2+ Psychotropic Drugs</td>
<td>Taking 2+ Psychotropic Drugs</td>
<td></td>
</tr>
<tr>
<td>Depression and Diabetes</td>
<td>Chronic Pain Management with the use of Narcotics</td>
<td>Chronic Pain Management with the use of Narcotics</td>
<td></td>
</tr>
<tr>
<td>History of Falls</td>
<td>Treatment for ESRD</td>
<td>Treatment for ESRD</td>
<td></td>
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</tbody>
</table>
So why is this important to the Transition Coordinator?

- Context of chronic illnesses
- Knowledge
- Role effectiveness
- Participant benefits
Knowledge to guide participants behaviors.

Health risk behaviors = unhealthy behaviors one can change.

Four of these health risk behaviors
- lack of exercise or physical activity,
- poor nutrition,
- tobacco use, and
- drinking too much alcohol

cause much of the illness, suffering, and early death related to chronic diseases and conditions.
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Systems: Cardiovascular

- **Stroke**
  - Cerebrovascular Accident
  - CVA
  - Brain Attack
  - Emergent event
  - “Pre-stroke” TIA
What is a Stroke?

A stroke is a "brain attack". It can happen to anyone at any time.

Blood flow to an area of brain is cut off. Cells are deprived of oxygen and begin to die. Abilities controlled by that area of the brain such as memory and muscle control are lost.
Systems: Cardiovascular

- Types of Strokes
  - Hemorrhagic Stroke, Brain Bleed
  - Ischemic Stroke
Types of Strokes

Hemorrhagic Stroke, Brain Bleed

A brain aneurism burst or a weakened blood vessel leak (hemorrhagic) is one of two types of stroke. While the least common of the two types of stroke it most often results in death.
**Types of Strokes**

**Ischemic Stroke**

- A blood vessel carrying blood to the brain is blocked by a blood clot (ischemic) is one type of stroke.
What is a TIA (Transient Ischemic Attack)?

- When blood flow to part of the brain stops for a short period of time, also called transient ischemic attack (TIA), it can mimic stroke-like symptoms. These appear and last less than 24 hours before disappearing.
TIA symptoms should be considered an emergency *in case it is a Stroke*:

- Acute care tests will determine TIA vs Stroke.
- Goal of TIA management: prevent a future stroke.
- There are many medications that help prevent blood clots from forming—reducing the risk of full-blown stroke.
- If a TIA is caused by blockage in the main artery in the neck that supplies blood to the brain, called the carotid artery, surgeries may be required to open the artery, and prevent a stroke. These procedures are known as endarterectomy and stenting.
Systems: Cardiovascular

**STROKE**
- **SUDDEN** numbness or weakness of face, arm or leg, especially on one side of the body
- **SUDDEN** confusion, trouble speaking, or understanding
- **SUDDEN** trouble seeing in one or both eyes
- **SUDDEN** trouble walking, dizziness, loss of balance or coordination
- **SUDDEN** severe headache with no known cause

Call 9-1-1 immediately if you observe any of these symptoms.
Note the time of the first symptom.
This information is important and can affect treatment decisions.
Systems: Cardiovascular

Act FAST for Stroke

Spot a Stroke

F. A. S. T.

ACT F.A.S.T.
If you think someone may be having a stroke, act F.A.S.T. and do this simple test:

FACE
Ask the person to smile. Does one side of the face droop?

ARM
Ask the person to raise both arms. Does one arm drift downward?

SPEECH
Ask the person to repeat a simple phrase. Is their speech slurred or strange?

TIME
If you observe any of these signs, call 9-1-1

StrokeAssociation.org
Preventing a Stroke:

- **Identify.** Review the risk factors and identify your personal risk.

- **Reduce your risk factors.** Work to reduce your stroke risk through lifestyle changes and if necessary medication.

- **Recognize and Respond.** Learn to recognize the signs and symptoms of a stroke by memorizing FAST. Respond to the first sight of stroke and help save lives.
Systems: Cardiovascular

- Stroke Medical Risk Factors
  - Atrial fibrillation
  - HTN
  - Diabetes
  - High cholesterol
  - Vascular disease
  - Carotid artery disease

- Lifestyle Risk Factors
  - Poor diet/nutrition
  - Physical inactivity
  - Smoker
  - Alcohol excess
Uncontrollable Risk factors for Stroke:

- Increasing age
- Aging women; Younger men
- African Americans, Hispanics, Asian/Pacific Islanders > Caucasians
- Family history of stroke or heart attack, especially at younger age
- Previous Stroke or TIA
**Systems:**

**Cardiovascular**

- Did you spot the red flags?
Red Flags, Pt 2.

- Purpose and Objectives
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- Systems:
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  - Respiratory
    - COPD and Asthma
    - Pneumonia
    - Infectious Disease
    - Influenza
- Conclusion
- References/Resources
Systems: Respiratory

- COPD
- Chronic Obstructive Pulmonary Disease
Asthma
COPD: Causes

- In the vast majority of cases, the lung damage that leads to COPD is caused by long-term cigarette smoking. But there are likely other factors at play in the development of COPD, such as a genetic susceptibility to the disease, because only about 25 percent of smokers develop COPD.

- Other irritants can cause COPD, including cigar smoke, secondhand smoke, pipe smoke, air pollution and workplace exposure to dust, smoke or fumes.
Asthma causes:
Overlap with Asthma

It’s easy to mistake one condition for the other at first. After all, they have one big thing in common: The inability to get enough air into the lungs. They’re also treated with some of the same medicines. So what makes them different?
**Systems: Respiratory**

**COPD**
- Umbrella term
- Chronic bronchitis
- Emphysema
- Or Combination
- Obstructive issue: Airways are swollen and filled with mucus.
- Lungs remain swollen or expanded, so difficult to get air out.

**Asthma**
- Restrictive issue: triggers cause airways to tighten or become smaller making it difficult to breathe in.

(EverydayHealth, 2015)
Systems: Respiratory

- **COPD**
  - Signs and Symptoms:
    - Shortness of breath, especially during physical activities
    - Wheezing
    - Chest tightness
    - Having to clear your throat first thing in the morning, due to excess mucus in your lungs
    - A chronic cough that produces sputum that may be clear, white, yellow or greenish
    - Blueness of the lips or fingernail beds (cyanosis)
    - Frequent respiratory infections
    - Lack of energy
    - Unintended weight loss (in later stages)
Complications of COPD include:

- Respiratory infections.
- Heart problems.
- Lung cancer.
- High blood pressure.
- Depression.
Management of COPD:

- 1. Smoking cessation.
- 2. Stop smoking.
- 3. Quit smoking.
Management of COPD:

- Medications:
  - Inhalers:
    - Anticholinergic Bronchodilator
      - **Short-acting** bronchodilators include albuterol (ProAir HFA, Ventolin HFA, others), levalbuterol (Xopenex), and ipratropium (Atrovent).
      - **Rescue inhalers.**
    - **Long-acting** bronchodilators include tiotropium (Spiriva), salmeterol (Serevent), formoterol (Foradil, Perforomist), arformoterol (Brovana), indacaterol (Aracpta) and aclidinium (Tudorza).
Management of COPD:

- Medications
  - Inhaled Steroids:
    - Inhaled corticosteroid medications can reduce airway inflammation and help prevent exacerbations.
    - Side effects may include bruising, oral infections and hoarseness.
    - These medications are useful for people with frequent exacerbations of COPD.
    - Fluticasone (Flovent) and budesonide (Pulmicort) are examples of inhaled steroids.
  - Oral Steroids
  - Phosphodiesterase-4 Inhibitor
    - A new type of medication approved for people with severe COPD and symptoms of chronic bronchitis is roflumilast (Daliresp), a phosphodiesterase-4 inhibitor. This drug decreases airway inflammation and relaxes the airways. Common side effects include diarrhea and weight loss.
  - Theophylline
  - Antibiotics: to treat exacerbations; do not prevent
Management of COPD:

**Oxygen:** Oxygen treatment increases the amount of oxygen that flows into your lungs and bloodstream. If your COPD is very bad and your blood oxygen levels are low, getting more oxygen can help you breathe better and **live longer**.

- There are several ways to deliver the oxygen, including:
  - Oxygen concentrators.
  - Oxygen-gas cylinders.
  - Liquid-oxygen devices.
- You don't have to stay at home or in a hospital to use oxygen. Oxygen systems are portable. You can use them while you do your daily tasks.
- **BUT, you must qualify.** (example, Pulse oxygen saturation level <88%)
Management of COPD:

Pulmonary Rehabilitation:

Include exercise training, education, and behavior change, designed to improve the physical and psychological condition of people with chronic respiratory disease and to promote the long-term adherence to health-enhancing behaviors.

Patients with chronic obstructive pulmonary disease (COPD) often decrease their physical activity because exercise can worsen dyspnea. The progressive deconditioning associated with inactivity initiates a vicious cycle, with dyspnea becoming problematic at ever lower physical demands.

Pulmonary rehabilitation aims to break the cycle.

Benefits include:

- decreased dyspnea,
- improved health-related quality of life,
- fewer days of hospitalization
- decreased health-care utilization

Initiation of exercise rehabilitation during or immediately after admission for acute on chronic respiratory failure reduces the extent of functional decline and hastens recovery. (Hanekom, 2011)
Management of COPD:

- **Surgery:**
  - Lung reduction/resection.
  - Lung transplant.

- Lung surgery is rarely used to treat [COPD](http://example.com). Surgery is never the first treatment choice and is only considered for people who have severe [COPD](http://example.com) that has not improved with other treatment.
Management of COPD:

- **Medications: Rescue inhaler**
  - Learn The Name!

- **Educate the participant:**

  - *Rescue* inhalers go to work right away. You should feel relief in less than a minute. Rescue inhalers are good to have, but letting your lungs get tight, then rushing in with a rescue inhaler is not the best way to treat COPD. Follow your medication schedule and take your controller medicines every day, even when you’re feeling fine. **If your COPD is under good control, you should not have to rely on rescue inhalers more than a couple times a week.**

(COPD Foundation, 2015)
Management of COPD:

- Medications: Inhalers
- Educate the participant:
  - Keep track of how long your inhalers last, and refill your prescriptions with time to spare so you don’t run out. Show a respiratory health professional how you take your inhaler, and learn the best technique so you get the most benefit from your inhaled medications.

(COPD Foundation, 2015)
Systems:
Respiratory

Self-Management-
slow disease worsening

- Control your breathing.
- Clear your airways.
- Exercise regularly.
Self-Management - slow disease worsening

- Eat healthy foods.
- Avoid smoke and air pollution.
- See your doctor regularly.
- Vaccinations.
Asthma

- Signs and Symptoms
- Coughing.
- Wheezing.
- Chest tightness.
- Shortness of breath.
Not all people who have asthma have these symptoms. Likewise, having these symptoms doesn't always mean that you have asthma. The best way to diagnose asthma for certain is to use a lung function test, a medical history (including type and frequency of symptoms), and a physical exam.

The types of asthma symptoms you have, how often they occur, and how severe they are may vary over time. Sometimes your symptoms may just annoy you. Other times, they may be troublesome enough to limit your daily routine.

Severe symptoms can be fatal. It's important to treat symptoms when you first notice them so they don't become severe.

With proper treatment, most people who have asthma can expect to have few, if any, symptoms either during the day or at night.
Tests to measure lung function

- You may also be given lung (pulmonary) function tests to determine how much air moves in and out as you breathe. These tests may include:

  - **Spirometry.** This test estimates the narrowing of your bronchial tubes by checking how much air you can exhale after a deep breath and how fast you can breathe out.

  - **Peak flow.** A peak flow meter is a simple device that measures how hard you can breathe out. Lower than usual peak flow readings are a sign your lungs may not be working as well and that your asthma may be getting worse. Your doctor will give you instructions on how to track and deal with low peak flow readings.

- Lung function tests often are done before and after taking a medication called a bronchodilator (brong-koh-DIE-lay-tur), such as albuterol, to open your airways. If your lung function improves with use of a bronchodilator, it's likely you have asthma.
Systems: Respiratory

- Peak-flow Meter:
Asthma

- Complications include:
  - Signs and symptoms that interfere with sleep, work or recreational activities
  - Sick days from work or school during asthma flare-ups
  - Permanent narrowing of the bronchial tubes (airway remodeling) that affects how well you can breathe
  - Emergency room visits and hospitalizations for severe asthma attacks
  - Side effects from long-term use of some medications used to stabilize severe asthma
  - Pneumonia
  - Death
**Management of Asthma:**

- **Medications:**
  - **Inhalers:**
    - **Anticholinergic Bronchodilator**
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    - Fluticasone (Flovent) and budesonide (Pulmicort) are examples of inhaled steroids.
  - Oral or Intravenous Steroids
  - Allergy Medications or Shots
Asthma

Management Plan:

If you have an asthma flare-up, a quick-relief inhaler can ease your symptoms right away. But if your long-term control medications are working properly, you shouldn't need to use your quick-relief inhaler very often.

Keep a record of how many puffs you use each week. If you need to use your quick-relief inhaler more often than your doctor recommends, see your doctor. You probably need to adjust your long-term control medication.
Asthma: Treat by severity for better control: A stepwise approach

Your treatment should be flexible and based on changes in your symptoms, which should be assessed thoroughly each time you see your doctor. Then your doctor can adjust your treatment accordingly.

For example, if your asthma is well-controlled, your doctor may prescribe less medicine. If your asthma isn't well-controlled or is getting worse, your doctor may increase your medication and recommend more-frequent visits.

Asthma action plan

Work with your doctor to create an asthma action plan that outlines in writing when to take certain medications or when to increase or decrease the dose of your medications based on your symptoms. Also include a list of your triggers and the steps you need to take to avoid them.

Your doctor may also recommend tracking your asthma symptoms or using a peak flow meter on a regular basis to monitor how well your treatment is controlling your asthma.
## Systems:
### Respiratory

**Asthma Action Plan (example):**

<table>
<thead>
<tr>
<th>ZONE:</th>
<th>ACTION:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Green</strong></td>
<td>Continue as normal</td>
</tr>
<tr>
<td>Peak flow greater than 80% best = 320 l/min</td>
<td></td>
</tr>
<tr>
<td><strong>Yellow</strong></td>
<td>Double your preventer medication and make doctor’s appointment.</td>
</tr>
<tr>
<td>Peak flow less than 80% best = 320 l/min</td>
<td></td>
</tr>
<tr>
<td><strong>Red</strong></td>
<td>Call an ambulance!</td>
</tr>
<tr>
<td>Peak flow less than 50% best = 200 l/min</td>
<td></td>
</tr>
</tbody>
</table>
Systems: Respiratory

- Asthma Action Plan (example):

```
My Asthma Action Plan

Name: ___________________________ Date: __________
Parent/Guardian: ___________________ Phone: __________
Healthcare Provider: ___________________________ Phone for healthcare provider: ________
Please call if needed. Emergency ________
Other instructions: ____________________________

Green Light (Daily):
- No cough or wheezing
- Can work and play
- Peak Flow Meter:

Yellow Light (Weekends):
- Slight cough
- Wheezing
- Hard to breathe
- Wake up at night
- Can do some, but not all activities
- Peak Flow Meter:

Red Light (Emergency):
- Wheezing hard and fast
- Can't work well
- Can't rest
- Can't talk
- Can't laugh

Call 911 if can't rest or talk because of extreme difficulty breathing or if symptoms do not improve in 30 minutes or if symptoms are very chest tightening and wheezing.

February 2019

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Asthma Action Plan (example):

- **80-100%**
  - Breathing is fine
  - No signs of an asthma attack

- **50-80%**
  - Breathing is tiptoe
  - Use rescue medication
  - Monitor peak expiratory flow for 20 to 48 minutes

- **Below 50%**
  - Breathing is labored or faster than normal
  - Breathlessness is a problem
  - Use a quick relief medication or nebulizer immediately and call the doctor or 911
Take away

- COPD and Asthma will never go away.
- They can be managed and risks/complications reduced

**Asthma**
- More intermittent airflow obstruction
- Improvement in airways obstruction with bronchodilators and steroids
- Cellular inflammation with eosinophils, mast cells, T-lymphocytes, and neutrophils in more severe disease
- Broad inflammatory mediator response
- Airways remodeling

**COPD**
- Progressively worsening airflow obstruction
- Often presents in 6th decade of life or later in patients
- More permanent airflow obstruction; less reversibility and less normalization of airflow obstruction
- Cellular inflammation: neutrophils, macrophages, eosinophils and mast cells may occur
- Emphysema frequently found
Did you spot the red flags?
Red Flags, Pt 2.

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Pneumonia

Pneumonia is an infection that inflames the air sacs in one or both lungs. The air sacs may fill with fluid or pus (purulent material), causing cough with phlegm or pus, fever, chills, and difficulty breathing.

A variety of organisms, including bacteria, viruses and fungi, can cause pneumonia.
Pneumonia

- Pneumonia can range in seriousness from mild to life-Threatening. It is most serious for infants and young children, people older than age 65, and people with health problems or weakened immune systems.
- “Walking Pneumonia” - simply a *milder* form of pneumonia.
Systems: Respiratory ACUTE ILLNESS

- Pneumonia MANAGEMENT:
  - First: Prevention
    - Pneumonia vaccine.
    - Good hygiene.
    - Don’t smoke
    - Boost immune system: good nutrition, good sleep, physical activity

(Mayo Clinic, 2015)
Pneumonia Vaccine:

There are currently 2 types of pneumococcal vaccines:

- pneumococcal polysaccharide vaccine (PPSV23 or Pneumovax®)
- pneumococcal conjugate vaccine (PCV13 or Prevnar 13®)

PPSV is recommended for all adults who are 65 years or older and for people 2 through 64 years old who are at high risk for pneumococcal disease.

PCV13 is recommended for all children younger than 5 years old, all adults 65 years or older, and people 6 years or older with certain risk factors.
When should adults get the PCV13 vaccine?

Adults who are 65 years or older and who have not previously received PCV13, should receive a dose of PCV13 first, followed 6 to 12 months later by a dose of PPSV23. If you have already received one or more doses of PPSV23, the dose of PCV13 should be given at least 1 year after you got your most recent dose of PPSV23.

Adults 19 years or older with one of the above listed conditions who have not received any pneumococcal vaccine, should get a dose of PCV13 first and should also continue to receive the recommended doses of PPSV23. Ask your healthcare provider for details.

Adults 19 years or older who have previously received one or more doses of PPSV23, and have one of the above listed conditions should also receive a dose of PCV13 and should continue to receive the remaining recommended doses of PPSV23. Ask your healthcare provider for details.
Which children and adults need the PPSV23 vaccine?

- All adults 65 years or older.
- Anyone 2 through 64 years old who has a long-term health problem such as: heart disease, lung disease, sickle cell disease, diabetes, alcoholism, cirrhosis, leaks of cerebrospinal fluid or cochlear implant.
- Anyone 2 through 64 years old who has a disease or condition that lowers the body’s resistance to infection, such as: Hodgkin’s disease; lymphoma or leukemia; kidney failure; multiple myeloma; nephrotic syndrome; HIV infection or AIDS; damaged spleen, or no spleen; organ transplant.
- Anyone 2 through 64 years old who is taking a drug or treatment that lowers the body’s resistance to infection, such as: long-term steroids, certain cancer drugs, radiation therapy.
- Any adult 19 through 64 years old who is a smoker or has asthma.
- Residents of long-term care facilities should be evaluated for indications to receive PCV13 and/or PPSV23.
- PPSV23 may be less effective for some people, especially those with lower resistance to infection. But these people should still be vaccinated, because they are more likely to have serious complications if they get pneumococcal disease.

(CDC, Vaccines, 2015)
Systems: Respiratory ACUTE ILLNESS

- Did you spot the red flags?
Red Flags, Pt 2.

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Influenza/Seasonal Flu:

- Viral infection that attacks your respiratory system — your nose, throat and lungs.
- Commonly called the flu, is not the same as stomach "flu" viruses that cause diarrhea and vomiting.
- For most people, influenza resolves on its own.
- Sometimes, influenza and its complications can be deadly.

(CDC, 2015)
INFLUENZA/SEASONAL FLU

- Viral, respiratory illness.
- If febrile, higher; extreme fatigue; body/muscle aches; dry cough.
- May develop bacterial infection, pneumonia, require hospitalization.
- Lab test may confirm.
- Vaccination = decrease risk or severity.

COMMON COLD

- Viral, respiratory illness.
- Milder symptoms: +/- low fever, mild aches, runny nose and stuffiness, milder body/muscle aches.
- Self-limiting; does not advance to more serious illnesses.
- No specific lab test.

(CDC, 2015)
Influenza Seasonal Flu Prevention:

- Obtain the annual flu shot.
- Try to avoid close contact with sick people.
- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose and mouth. Germs spread this way.

(CDC, 2015)
If you are sick with flu–like illness, CDC recommends that you stay home for at least 24 hours after your fever is gone except to get medical care or for other necessities. Your fever should be gone without the use of a fever-reducing medicine.

While sick, limit contact with others as much as possible to keep from infecting them.

For those with Chronic Health Conditions, it is important to call your physician/provider for guidance:

- Higher risk for developing complications, pneumonia.
- You may be asked to stay home and treat the symptoms:
  - Fever reducer, Pain reliever, Antihistamine, Decongestant
- You may be requested to go to the clinic for a blood test to confirm the illness and potentially obtain anti-viral/anti-flu medication.
  - Reduces the duration if started within 2 days

(CDC, 2015)
Antiviral medications with activity against influenza viruses are an important adjunct to influenza vaccine in the control of influenza.

Influenza antiviral prescription drugs can be used to treat influenza or to prevent influenza.

Three influenza antiviral medications approved by the U.S. Food and Drug Administration (FDA) are recommended for use in the United States during the 2015-2016 influenza season: oral oseltamivir (Tamiflu®), inhaled zanamivir (Relenza®), and intravenous peramivir (Rapivab®). These drugs are chemically related antiviral medications known as neuraminidase inhibitors that have activity against both influenza A and B viruses.
Summary of Influenza Antiviral Treatment Recommendations

- Clinical trials and observational data show that early antiviral treatment can shorten the duration of fever and illness symptoms, and may reduce the risk of complications from influenza (e.g., otitis media in young children, pneumonia, and respiratory failure).

- Early treatment of hospitalized patients can reduce death.

- Clinical benefit is greatest when antiviral treatment is administered early, especially within 48 hours of influenza illness onset.

- Antiviral treatment is recommended as early as possible for any patient with confirmed or suspected influenza who:
  - is hospitalized;
  - has severe, complicated, or progressive illness; or
  - is at higher risk for influenza complications.
### Antiviral Treatment for Influenza

<table>
<thead>
<tr>
<th>Antiviral Agent</th>
<th>Activity Against</th>
<th>Use</th>
<th>Recommended For</th>
<th>Not Recommended for Use in</th>
<th>Adverse Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oseltamivir (Tamiflu®)</td>
<td>Influenza A and B</td>
<td>Treatment</td>
<td>Any age(^1)</td>
<td>N/A</td>
<td><strong>Adverse events:</strong> nausea, vomiting. Postmarketing reports of serious skin reactions and sporadic, transient neuropsychiatric events (self-injury or delirium; mainly reported among Japanese adolescents and adults).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemoprophylaxis</td>
<td>3 months and older(^1)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Zanamivir (Relenza®)</td>
<td>Influenza A and B</td>
<td>Treatment</td>
<td>7 yrs and older</td>
<td>people with underlying respiratory disease (e.g., asthma, COPD)(^2)</td>
<td><strong>Allergic reactions:</strong> oropharyngeal or facial edema. <strong>Adverse events:</strong> diarrhea, nausea, sinusitis, nasal signs and symptoms, bronchitis, cough, headache, dizziness, and ear, nose and throat infections.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemoprophylaxis</td>
<td>5 yrs and older</td>
<td>people with underlying respiratory disease (e.g., asthma, COPD)(^2)</td>
<td></td>
</tr>
<tr>
<td>Peramivir (Rapivab®)</td>
<td>Influenza A and B(^3)</td>
<td>Treatment</td>
<td>18 yrs and older N/A</td>
<td>N/A</td>
<td><strong>Adverse events:</strong> diarrhea. Postmarketing reports of serious skin reactions and sporadic, transient neuropsychiatric events (self-injury or delirium; mainly reported among Japanese adolescents and adults).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemoprophylaxis</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
Systems: Respiratory Infectious Disease

- Did you spot the red flags?
Conclusion

Listen To Your Red Flags...
They're Trying To Tell You Something


CDC. http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm


References/Resources

- [http://www.mayoclinic.org/diseases-conditions/asthma/basics/treatment/con-20026992](http://www.mayoclinic.org/diseases-conditions/asthma/basics/treatment/con-20026992)


“Red Flags” in Common Medical Conditions, Part 2

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