Care of Clients with Chronic Health Care Needs in Medical Special Need Shelters

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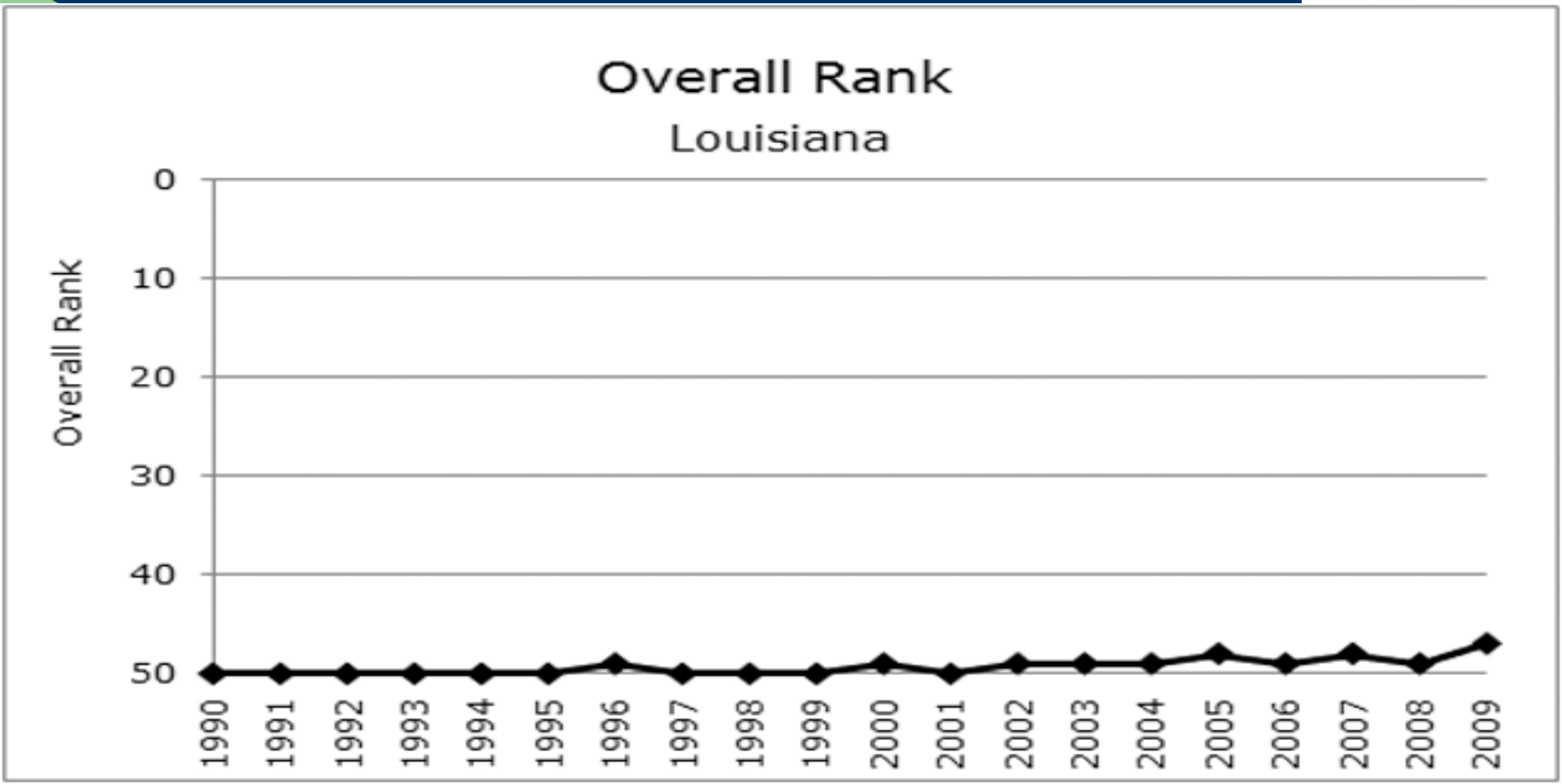
Goal

- To provide DHH and volunteer clinical staff resources to utilize evidence-based best practices to mitigate complications of Chronic Disease in Medical Special Needs Shelters (MSNS).

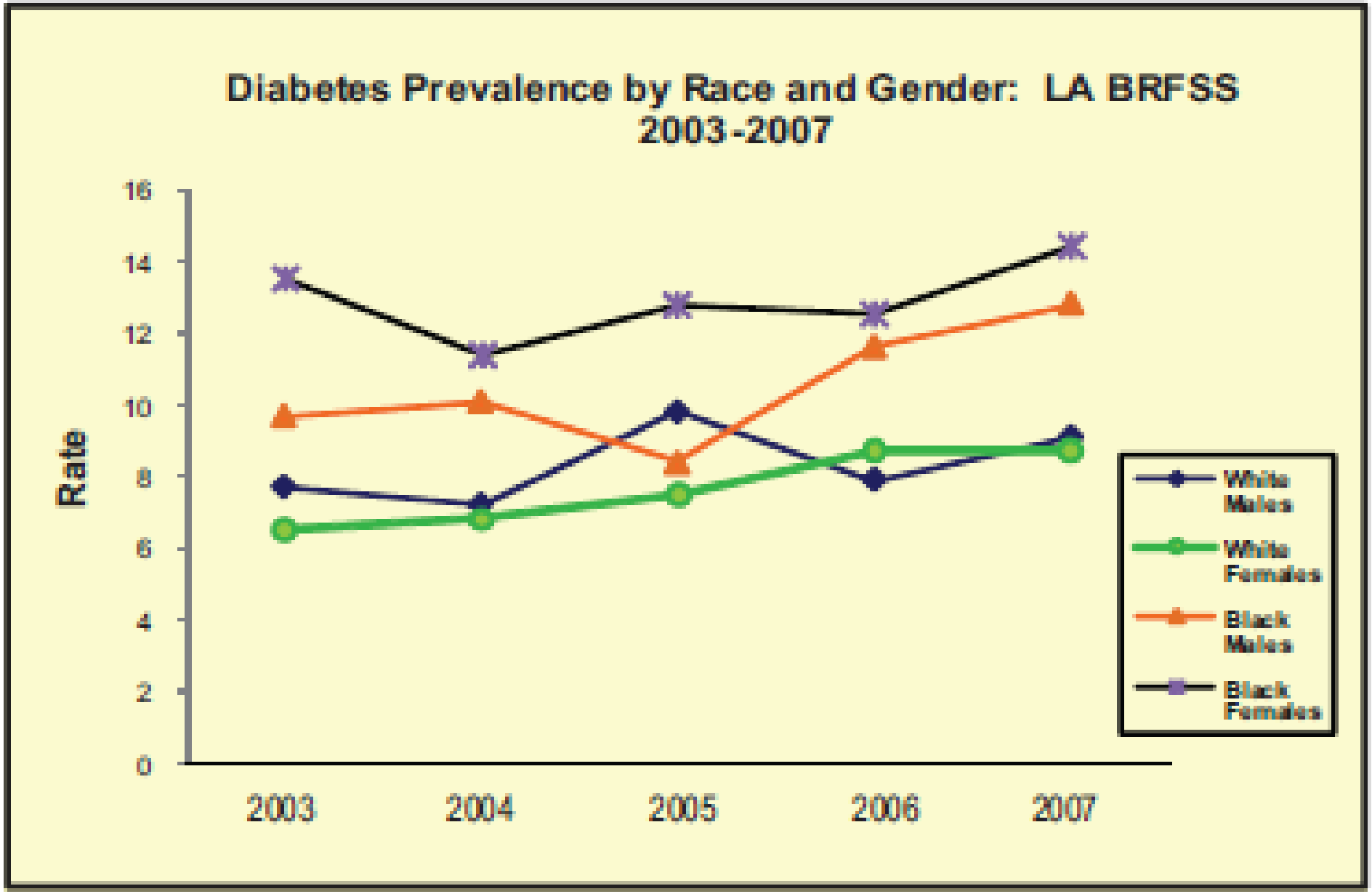
Objectives

- Identify specific interventions for shelter staff to care for the chronically ill client in MSNS.
- To provide interactive scenarios of nursing/clinical skills that may be utilized in MSNS.

Louisiana 2009 Health Ranking

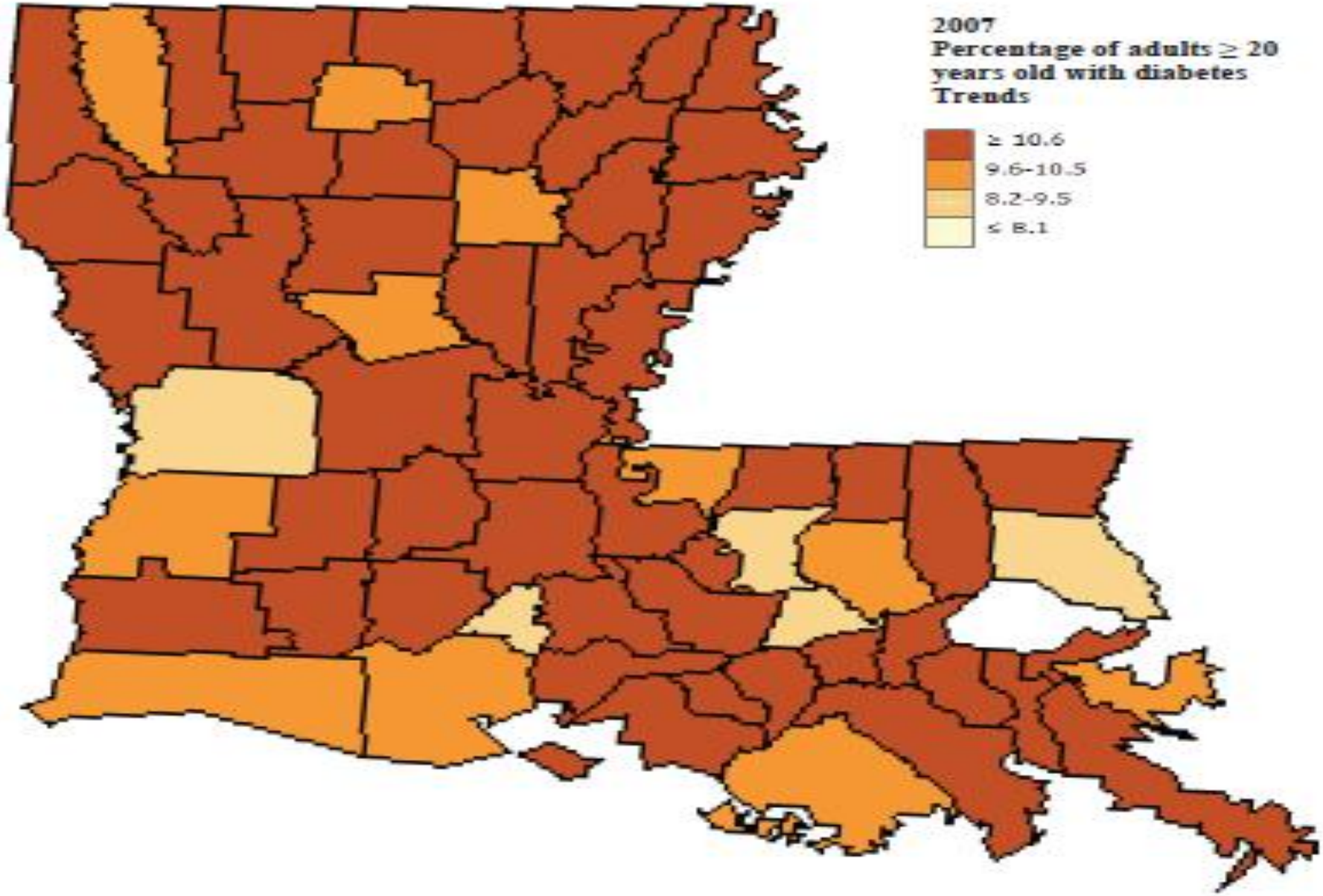


Diabetes Care



Source: Louisiana Department of Health and Hospitals, Bureau of Primary Care and Rural Health, Chronic Disease Unit, BRFSS 2007

2007 Estimates of the Percentage of Adults with Diagnosed Diabetes in Louisiana



Self- Monitoring of Blood Glucose

• Before Meals	90-130
• 1-2 Hours After Meals	below 180
• Bedtime	110-150

Diabetes Complications

- Hypoglycemia blood glucose <70mh/dl

- Hyperglycemia
  -specific clinical manifestations related to elevated levels may vary according to client

Signs/Symptoms of Hypoglycemia

- Shakiness
- Dizziness
- Sweating
- Hunger
- Headache
- Pale skin color

Signs/Symptoms of Hypoglycemia

- Sudden moodiness or behavior changes, such as crying for no apparent reason
- Clumsy or jerky movements
- Seizure
- Tingling sensations around the mouth

MSNS Care of Hypoglycemia

Instruct client to ingest 10-15 grams of a simple (fast-acting) carbohydrate such as:

- 2 or 3 glucose tablets
- 1/2 cup (4 ounces) of any fruit juice
- a piece of fruit or a small box of raisins
- 1 cup (8 ounces) of milk

MSNS Care of Hypoglycemia

- 1/2 cup (4 ounces) of a regular (not diet) soft drink
- 5 or 6 pieces of hard candy
- 1 or 2 teaspoons of sugar or honey

- **Avoid candy bars, cookies, ice cream, fat delays sugar absorption**

MSNS Care of Hypoglycemia

- Repeat blood glucose check in 15 minutes post carbohydrate.
- Consult with Nutritionist. Eat snack/meals every 3 hours.
- If client blood glucose level remains < 70 mg/dl after two-three doses of carbohydrate, immediately notify House Medical Officer.
- Emergency intervention, Glucagon 1mg IM or SQ.

MSNS Care of Hypoglycemia

If someone pass out from suspected hypoglycemia:

- NOT inject insulin
- NOT give you food or fluids
- NOT put their hands in your mouth
- Inject glucagon
- Call for emergency help

Signs/Symptoms of Hyperglycemia

- Elevated blood glucose*
- Increase in urination
- Increase in appetite, followed by lack of appetite
- Weakness, fatigue
- Blurred vision

Signs/Symptoms of Hyperglycemia

- Headache
- Nausea/vomiting
- Abdominal cramps
- Glycosuria

MSNS Care of Hyperglycemia

- Notify House Medical Officer, administer rapid-acting insulin if ordered
- Continue diabetes medication as ordered
- Repeat of blood glucose testing

MSNS Care of Hyperglycemia

- Encourage client to not exercise or participate in strenuous activities
- Encourage and instruct client to drink fluids hourly
- If blood glucose levels continue to elevate, consult with MD for possible transfer to in-patient setting

Insulin Management

- **Rapid-acting, insulin lispro (Humalog)**
  Starts working in 5 to 15 minutes
  Lowers blood glucose most in 45 to 90 minutes
  Finishes working in 3 to 4 hours

- **Rapid-acting, insulin aspart (Novolog)**
  Starts working in 10 to 20 minutes
  Lowers blood glucose most in 1 to 3 hours
  Finishes working in 3 to 5 hours

Insulin Management

- **Short-acting, Regular (R) insulin**
  Starts working in 30 minutes
  Lowers blood glucose most in 2 to 5 hours
  Finishes working in 5 to 8 hours

- **Intermediate-acting, NPH (N) or Lente (L) insulin**
  Starts working in 1 to 3 hours
  Lowers blood glucose most in 6 to 12 hours
  Finishes working in 16 to 24 hours

Insulin Management

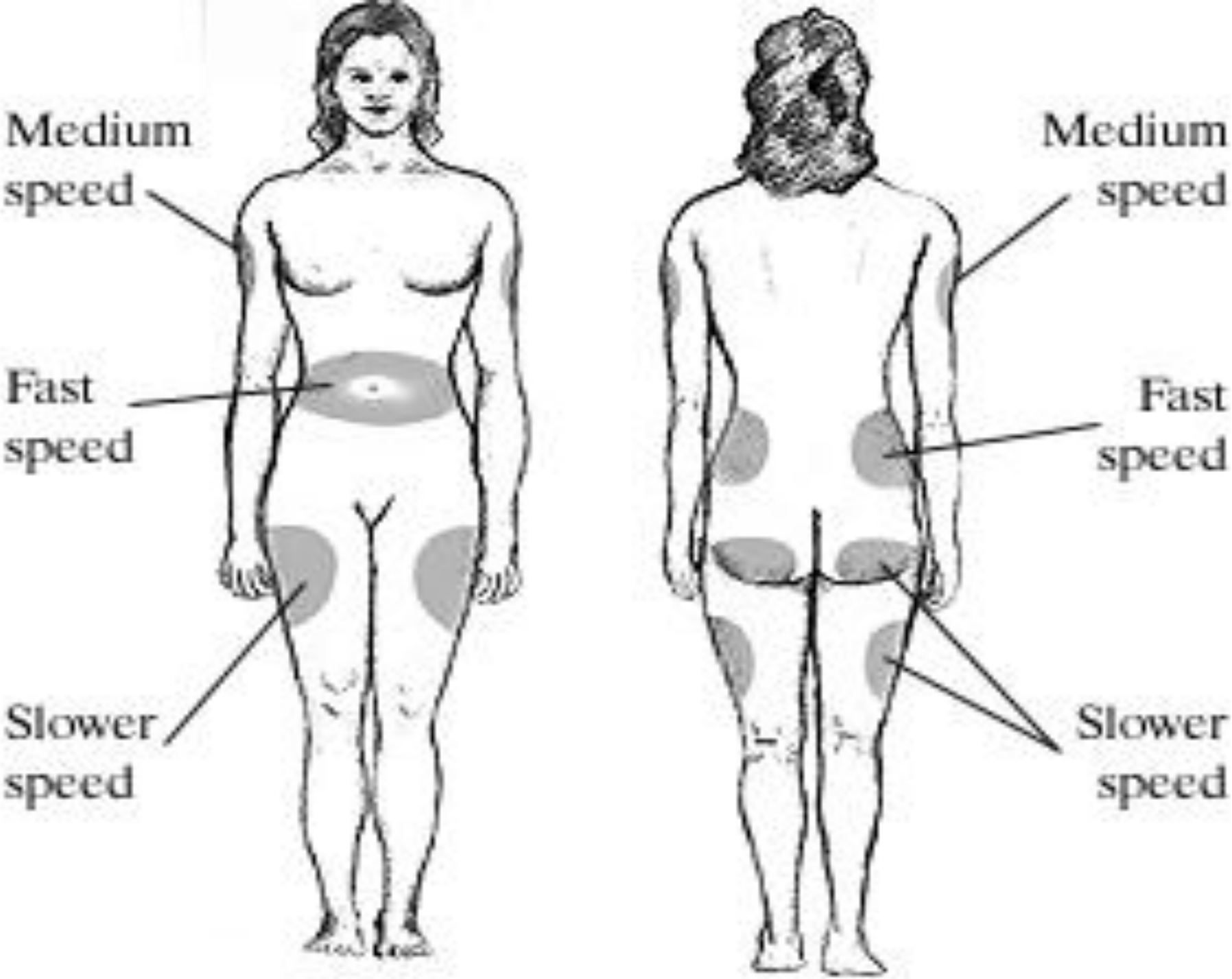
- **Long-acting, Ultralente (U) insulin**
  Starts working in 4 to 6 hours
  Lowers blood glucose most in 8 to 20 hours
  Finishes working in 24 to 28 hours

- **Very long-acting, insulin glargine (Lantus)**
  Starts working in 1 hour
  Lowers blood glucose evenly for 24 hours
  Finishes working in 24 hours and is taken once a day at bedtime

Insulin Management

Premixed

- **NPH and Regular insulin mixture**
  Two types of insulins mixed together in one bottle
  Starts working in 30 minutes
  Lowers blood sugar most in 7 to 12 hours
  Finishes working in 16 to 24 hours


Medium speed
Fast speed
Slower speed
Medium speed
Fast speed
Slower speed

Interactive Client Scenario

Cardiovascular Health

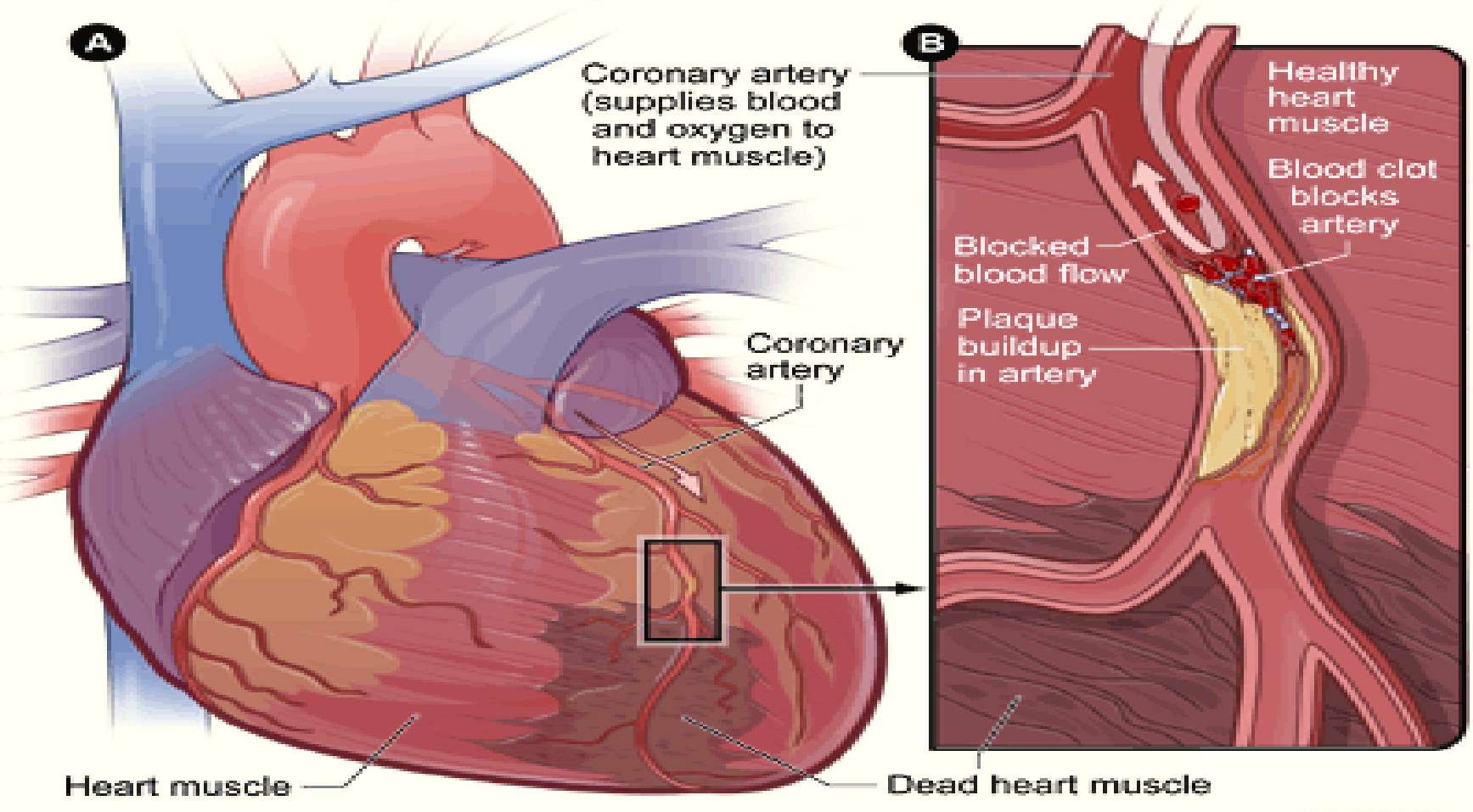
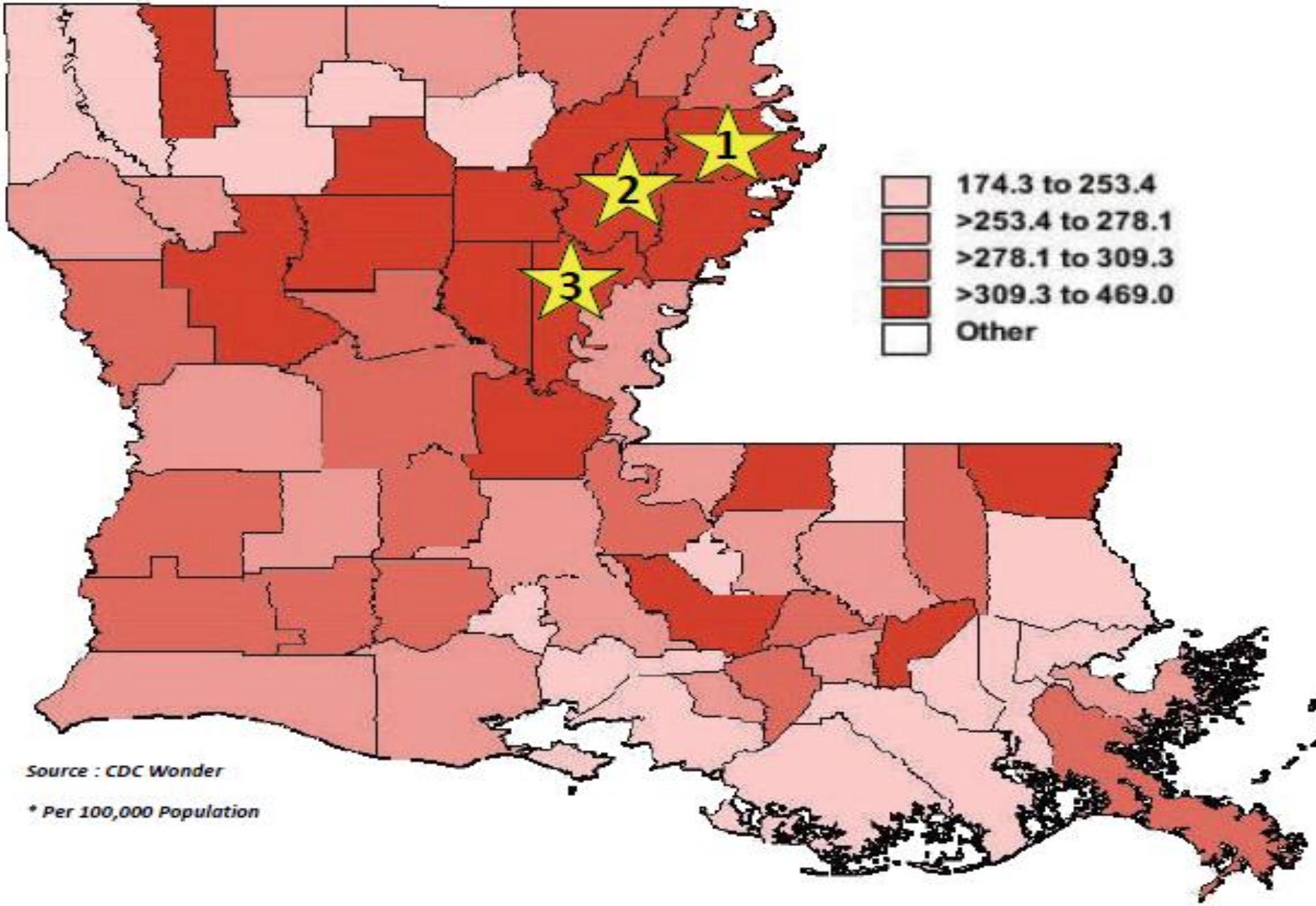


Figure 34: Age-Adjusted Heart Disease Death Rates* by Parish, Louisiana, 2001-2005



Common Cardiovascular Diseases

- Hypertension (HTN)

- CAD (Coronary Artery Disease)
  -Myocardial Infarction/Angina
  -Arrhythmias
  -Congestive Heart failure

Categories for Blood Pressure Levels in Adults
(Ages 18 Years and Older)

	Blood Pressure Level (mmHg)		
Category	**Systolic**		**Diastolic**
Normal	< 120	and	< 80
Pre-hypertension	120-139	or	80-89
High Blood Pressure			
Stage 1 Hypertension	140–159	or	90–99
Stage 2 Hypertension	160	or	100

HTN Signs/Symptoms

- Confusion
- Vision changes
- Angina-like chest pain (crushing chest pain)
- Blood in urine
- Nosebleed
- Irregular heartbeat
- Ear noise or buzzing
- Headache

MSNS Care of HTN

- Blood pressure and pulse assessment
- Continue HTN medications as ordered
- Consult with Nutritionist on dietary options for client consumption
- Notify Medical House Officer immediately if diastolic blood pressure is > 100 to prevent Hypertensive Crisis.

Signs/Symptoms of Myocardial Infraction and Angina

- Squeezing or heavy pressure
- Bad indigestion
- Shortness of breath
- Lightheadedness - dizziness
- Nausea or vomiting
- Sweating, which may be profuse
- Rapid pulse
- **Difficult to determine MI or Angina is MSNS.**

MSNS Care of Myocardial Infraction and Angina

- Notify EMS and Medical House Officer
- Ensure patent airway
- Administer oxygen, determine location of pain
- Medicate as prescribed according to repeat dosage instructions, (Nitroglycerine, Aspirin, Beta Blocker)

MSNS Care of Myocardial Infraction and Angina

- Monitor vital signs, consciousness, cardiac rhythm, and oxygen saturation
- Prepare to insert/ start IV with EMS assistance
- Prepare for CPR, ACLS

Signs/Symptoms of CHF

- Weight gain
- Swelling of feet and ankles
- Swelling of the abdomen
- Pronounced neck veins
- Nausea and vomiting
- Shortness of breath with activity, or after lying down for a while

Signs/Symptoms of CHF

- Difficulty sleeping
- Fatigue, weakness, faintness
- Irregular or rapid pulse
- Cough
- Decreased urine production

MSNS Care of CHF

- Monitor and assess vital signs, lung sounds
- Assess for peripheral or generalized edema
- Medicate appropriately as prescribed
- Consult Nutritionist, sodium restricted diet

MSNS Care of CHF

- Administer oxygen according to home dose or start at low dose, 2-6 L/min
- Have client sit-up as tolerated, utilize multiple pillows for assistance to elevate head
- Obtain oxygen saturation, if exhibit s/s of respiratory distress

MSNS Arrhythmia Assessment

Any client that exhibits/ complains of:

- Fast or slow heart beat (palpitations)
- Skipping beats
- Fainting
- Light-headedness, dizziness
- Chest pain
- Shortness of breath
- Paleness
- Sweating

MSNS Care of Arrhythmias

- Apply cardiac monitoring electrodes
- Notify EMS and Medical House Officer
- Ensure patent airway
- Prepare for CPR, ACLS
- Administer oxygen

Commonly Prescribed Cardiac Medications

Diuretics (Furosemide, Amiloride Hydrochlorothiazide**)**

- Diuretics are sometimes called "water pills" because they work in the kidney and flush excess water and sodium from the body.

Beta-blockers (Metoprolol, Propranolol, Carvedilol)

- Beta-blockers reduce nerve impulses to the heart and blood vessels. This makes the heart beat slower and with less force. Blood pressure drops and the heart works less hard.

Commonly Prescribed Cardiac Medications

ACE inhibitors (Captopril, Lisinopril, Benazepril)

- Angiotensin converting enzyme (ACE) inhibitors prevent the formation of a hormone called angiotensin II, which normally causes blood vessels to narrow. The ACE inhibitors cause the vessels to relax and blood pressure goes down.

Angiotensin antagonists (Candesartan, Losartan, Valsartan)

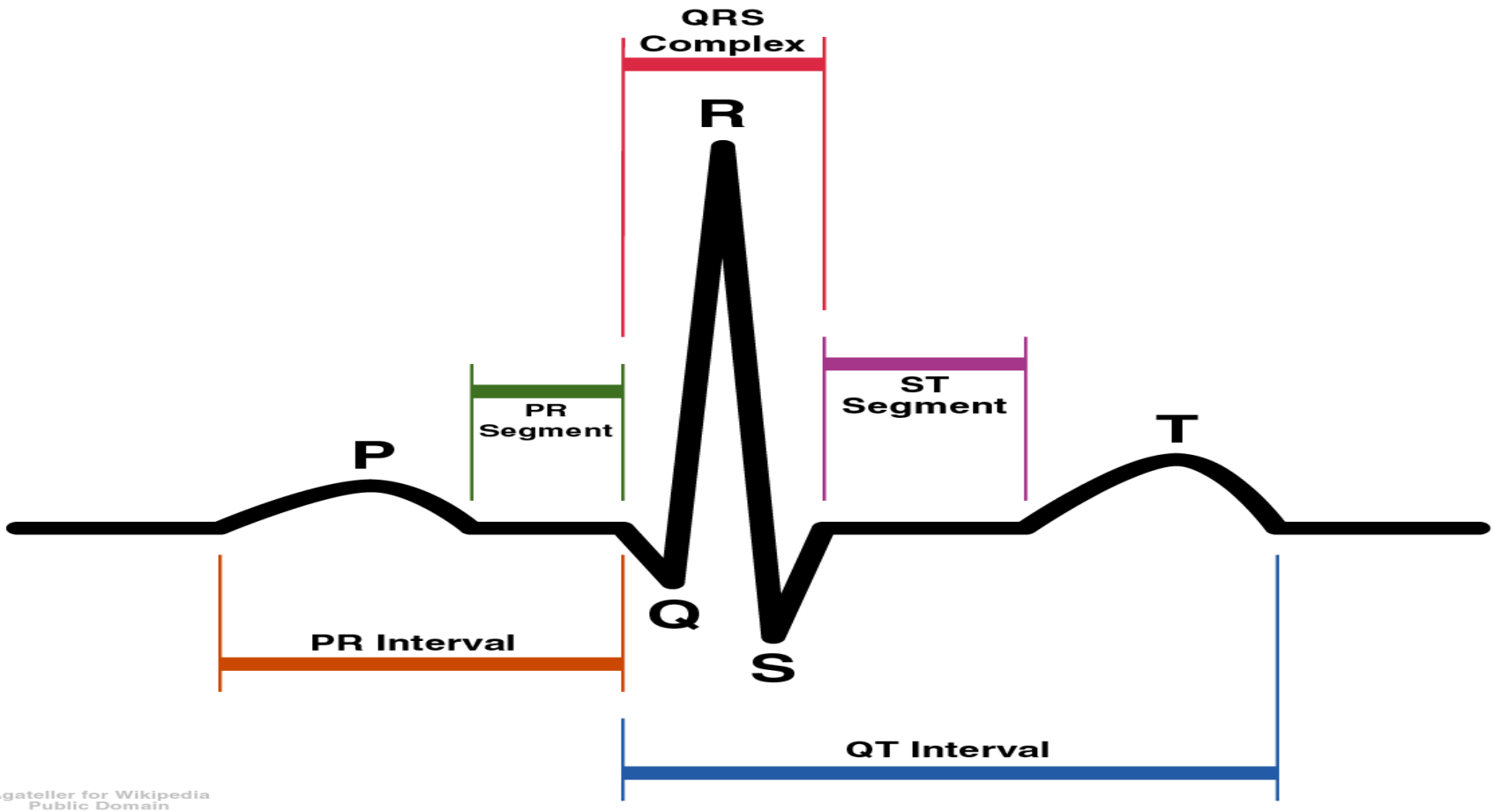
- Angiotensin antagonists shield blood vessels from angiotensin II. As a result, the vessels become wider and blood pressure goes down

Commonly Prescribed Cardiac Medications

Calcium channel blockers(Amlodipine, Dilitiazem, Felodipine)

- CCBs keep calcium from entering the muscle cells of the heart and blood vessels. This causes the blood vessels to relax and pressure goes down.

Patient Scenario



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Cerebrovascular Accident (CVA)

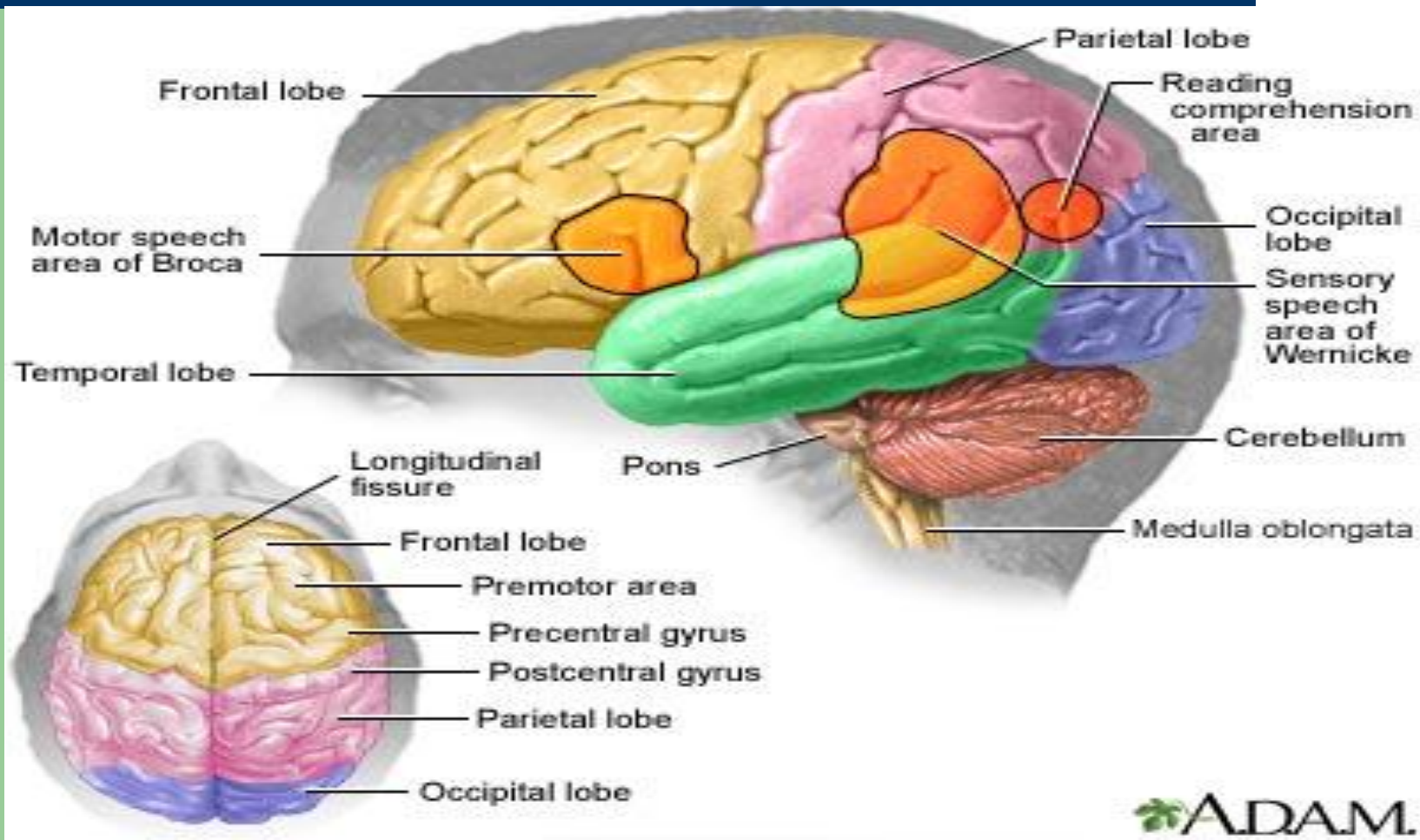
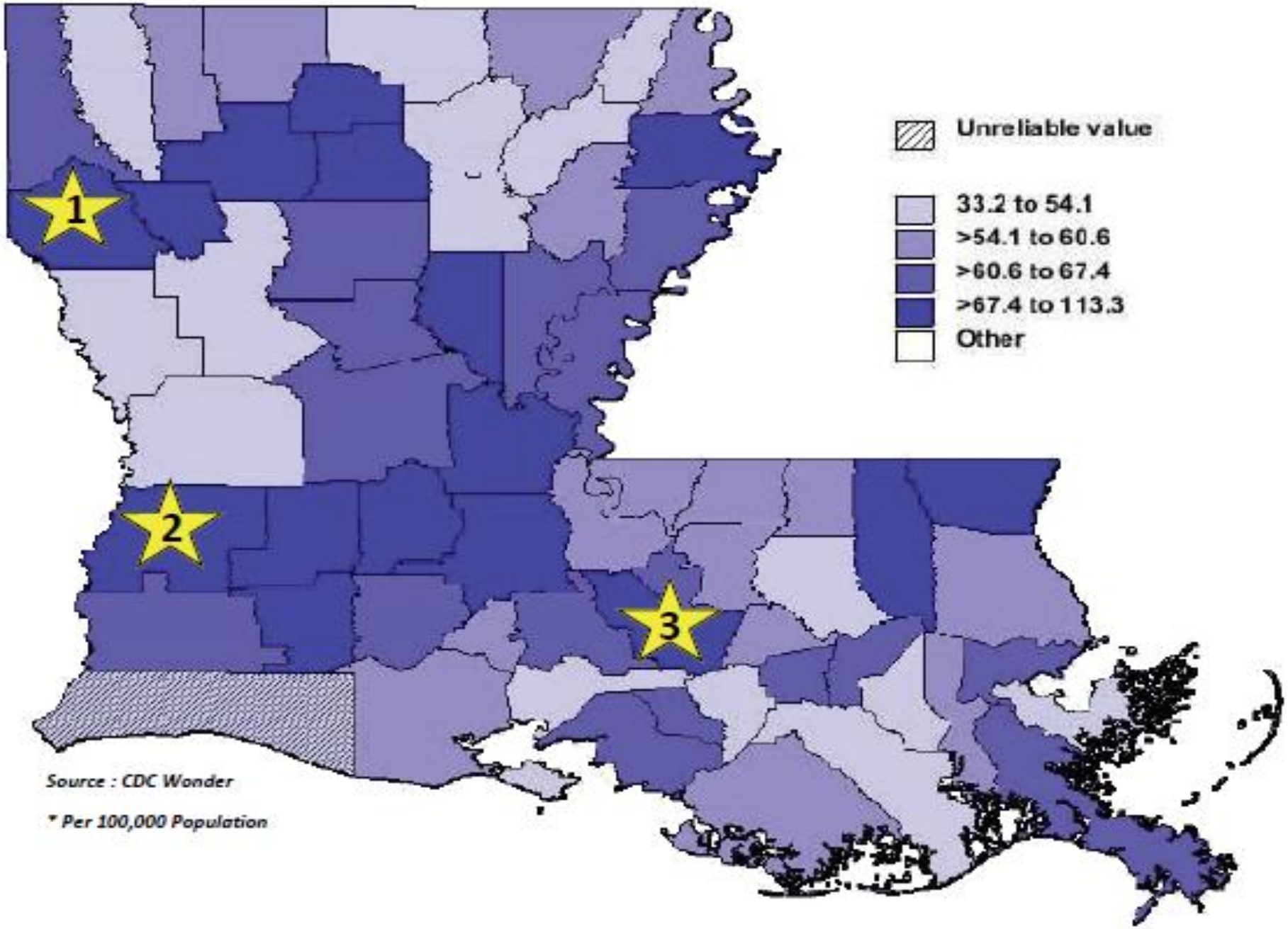


Figure 35: Age-Adjusted Stroke Death Rates* by Parish, Louisiana, 2001-2005



CVA Signs/Symptoms

The symptoms of stroke depend on what part of the brain is damaged. In some cases, a person may not even be aware that he or she has had a stroke.

Usually, a SUDDEN development of one or more of the following indicates a stroke:

CVA Signs/Symptoms

- Weakness or paralysis of an arm, leg, side of the face, or any part of the body
- Numbness, tingling, decreased sensation
- Vision changes
- Slurred speech, inability to speak or understand speech, difficulty reading or writing

CVA Signs/Symptoms

- Swallowing difficulties or drooling
- Loss of memory
- Vertigo
- Loss of balance or coordination
- Personality changes
- Mood changes (depression, apathy)
- Drowsiness, lethargy, or loss of consciousness
- Uncontrollable eye movements or eyelid drooping

Act FAST- Stoke Assessment

- FACE

Ask the person to smile.

Does one side of the face droop?

- ARMS

Ask the person to raise both arms.

Does one arm drift downward?

- SPEECH

Ask the person to repeat a simple sentence.

Are the words slurred?

Can he/she repeat the sentence correctly?

- TIME

If the person shows any of these symptoms, time is important.

Call 911 or get to the hospital fast. Brain cells are dying.

MSNS Care of CVA

- If one or more of these symptoms is present for less than 24 hours, it may be a transient ischemic attack (TIA). A TIA is a temporary loss of brain function and a warning sign for a possible future stroke.

- The goal is to get the person to the emergency room immediately, determine if he or she is having a bleeding stroke or a stroke from a blood clot, and start therapy -- **all within 3 hours of when the stroke began**.

MSNS Care of CVA

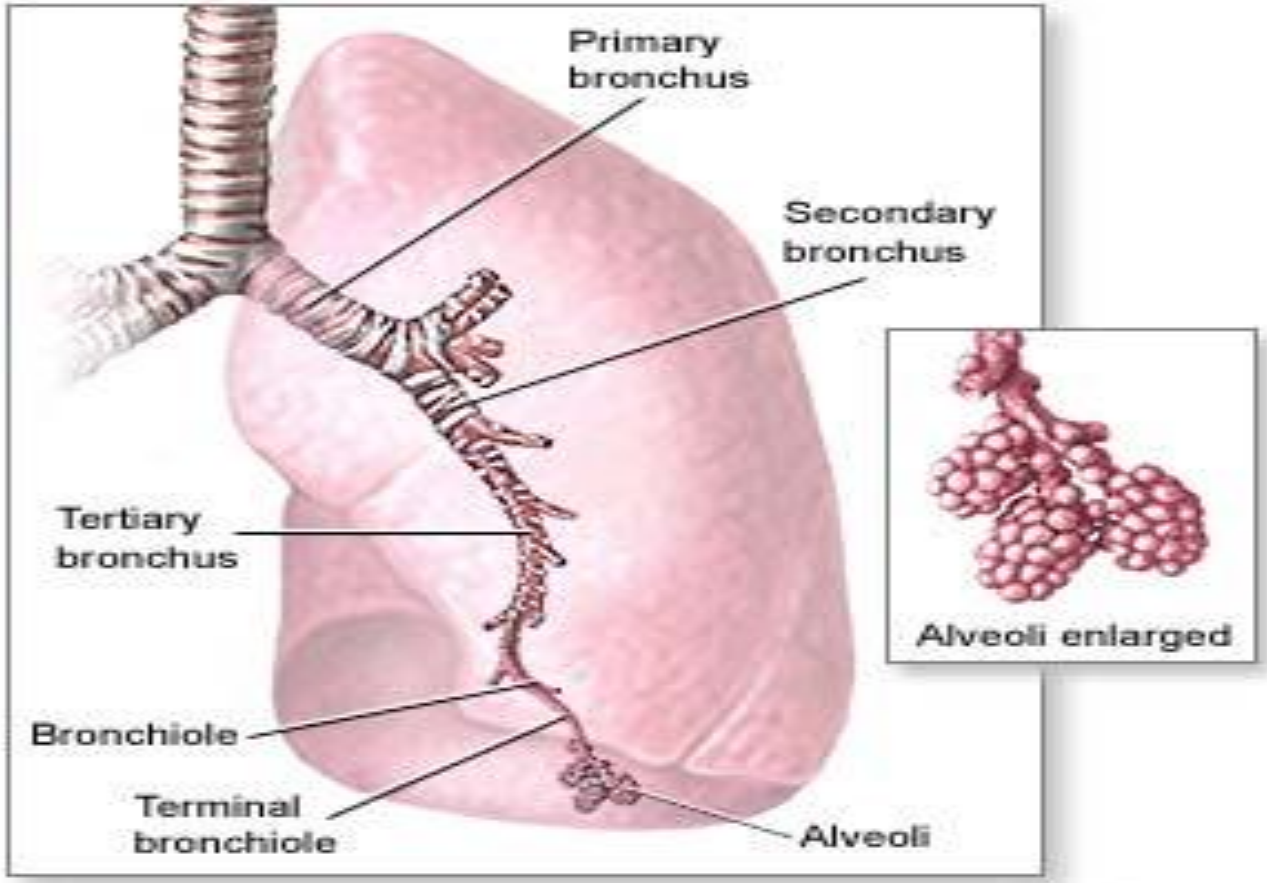
- Notify EMS and House Medical Officer
- Assess oxygen saturation and provide oxygen
- Institute Seizure precautions

Stroke Recurrence

- Ask patient of previous history of stroke.
- Recurrent stroke is frequent; about 25 percent of people who recover from their first stroke will have another stroke within 5 years.

Client Scenario

Respiratory Disease



ADAM.

Most Common Respiratory Disorders

- Asthma
- Chronic Obstructive Pulmonary Disease
  - Emphysema
  - Chronic Bronchitis

Signs/Symptoms Of Asthma

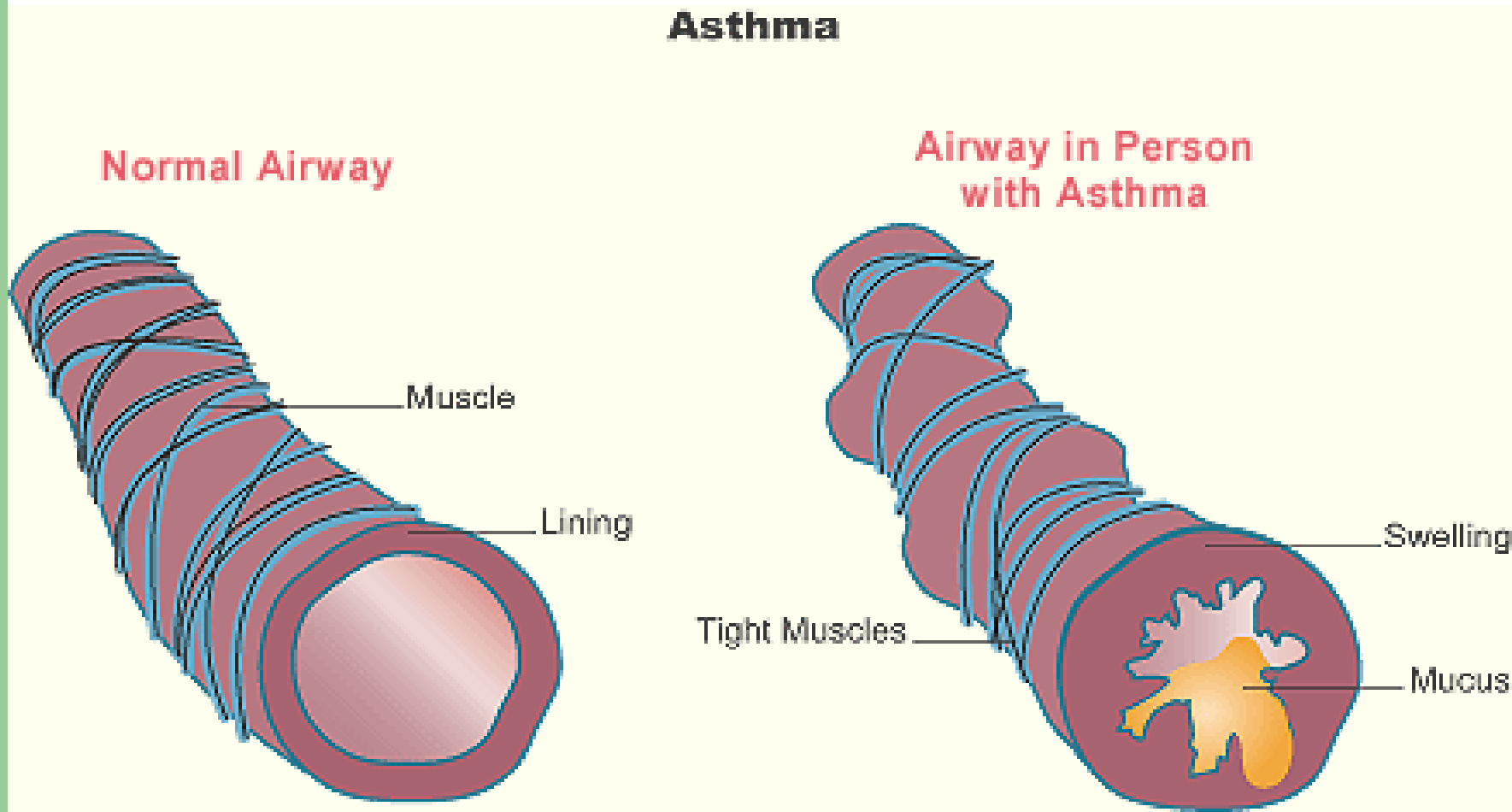
- Wheezing
- Cough with or without sputum (phlegm) production
- Shortness of breath that is aggravated by exercise
- Breathing that requires increased work
- Intercostal retractions (pulling of the skin between the ribs when breathing)

Signs/Symptoms Of Asthma

Emergency symptoms:

- Extreme difficulty breathing
- Bluish color to the lips and face
- Severe anxiety due to shortness of breath
- Rapid pulse
- Sweating
- Decreased level of consciousness (severe drowsiness or confusion) during an asthma attack

Asthma Affects on Airways



MSNS Care of Asthma Clients

- Assess vitals signs, lung sounds, and oxygen saturation
- Medicate as prescribed and provide oxygen therapy as needed
- Encourage and assist to use peak flow meter daily
- If client exhibit late s/s of asthma, notify activate and Medical House Officer

Peak Flow Meter- Asthma

- Peak flow measurements can help show when medication is needed, or other action needs to be taken. Peak flow values of 50-80% of an individual's personal best indicate a moderate asthma attack, while values below 50% indicate a severe attack.

Peak Flow Meter- Asthma

Respiratory Hygiene/Cough Etiquette

- Provide tissues and a receptacle for used tissue disposal (e.g. paper or plastic bag)
-
- Provide personal dispenser of alcohol hand gel; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available

Patient Scenario

References

1. **Reference and Web Services**
   National Library of Medicine
   8600 Rockville Pike
   Bethesda, MD 20894
   www.nlm.nih.gov
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   9000 Rockville Pike
   Bethesda, Maryland 20892
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5. Centers for Disease Control and Prevention, 1600 Clifton Rd, Atlanta, GA 30333, U.S.A http://www.cdc.gov
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THANK YOU

- Questions/Comments
- Contact: tasha.bergeron@la.gov