Chronic Conditions 101

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Objectives

• Understand basic diagnostic and treatment of:
  – Hypertension
  – Hyperlipidemia
  – Congestive Heart Failure
  – Vascular Diseases

• Understand primary and secondary prevention of these conditions

• Understand quality care goals

• Understand how care managers can help promote positive outcomes
Why?

Many individuals with chronic diseases have:

• Higher health care costs

• More frequent Utilization of the ECC and hospitalizations

• Are at risk for other conditions/diseases

• Struggle to understand health care, despite their educational level
Our Role As Care Managers

• Help individuals navigate the health care system

• Understanding the basics of their conditions & set goals

• Help patient to have more meaningful visits with their providers

• Help improve short-term and long-term outcomes, through self-management coaching

• Link patients to supportive services
Hypertension- What’s Going On?

• The arteries carrying the blood throughout the body are constricted

• Blood moves throughout the body at a higher pressure

• The heart is working in overtime to move blood throughout the body
Question: What Happens When the Heart Works Too Much Overtime???
Answer: It Burns Out, or Weakens
Risk factors

- Inactivity
- Age
- Family history and ethnicity
- High blood pressure
- Binge drinking & substance misuse
- Heart disease
- Diabetes
- Previous strokes & TIs
- Oral contraception & HRT
- Smoking
- Obesity: unhealthy eating
Hypertension: The Silent Killer?
Most Individuals Do NOT Have Symptoms Until Their Blood Pressure Is DANGEROUSLY High
Individuals May Report:

** Most commonly a headache **

Other possible symptoms:
- Fatigue
- Vision changes
- Nosebleeds
- Palpitations
Left Untreated: Hypertension Risks

– Vascular Diseases
  • Cardiovascular: heart attacks
  • Cerebral vascular: stroke, TIAS
  • Atherosclerosis: “hardening of the arteries”
  • Nephropathy “kidney disease”

– Atrial Fibrillation/Flutter
– Aneurysm
– Memory issues
PREVENTION comes FIRST
Primary Prevention

Reduce your sodium and alcohol intake, and stop smoking

Maintain a healthy weight
Eat a healthy diet
Exercise
STRESS MANAGEMENT
Secondary Prevention

• Medication compliance is #1

• Management of other chronic conditions such as:
  – Diabetes
  – Hyperlipidemia
  – Obesity
  – Mental health conditions (anxiety, insomnia, depression)
  – Sleep apnea

• Lifestyle modifications: all the primary prevention factors
So What’s High?

• Normal Blood Pressure for an Adult:
  – <120/80

• Stage 1 Hypertension
  – 140-159/90-99

• Stage 2 Hypertension
  – >160/100
What Do the Different Stages Mean?

Different stages require different levels of intervention

• Stage 1 can often be controlled with:
  – Diet modification
  – Exercise/weight loss
  – Smoking Cessation
  – 1 medication

• Stage 2 Often Requires:
  – More frequent follow-up AND closer monitoring
  – Multiple classifications of medications
So How Can We Help?
We Can.....

• Promote Health Literacy

• Identify Barriers to Improve Medication Adherence

• Patient-centered approach
  – GOALS that are actionable and attainable

• Advocate, Have Patients Write down Those Questions!
HIGH CHOLESTEROL

hyperlipidemia

treatment

medication

diet hdl

deadly hereditary lifestyle

fatty total fasting managex

Prevention pills rx high density silent

LDL killer

risk exercise enzymes low density

ratio doctors

disease foods lipids blood venous

liver

heart

Hudson Headwaters Health Network

Health Care for Everyone
Hyperlipidemia: What Is It?

- TOO MUCH fat in the blood stream
- This leads to “plaque” build-up along the walls of blood vessels
- “Plaque” is a hard layer of cholesterol
Causes of Hyperlipidemia

- Diet
- Hypothyroidism
- Nephrotic syndrome
- Anorexia nervosa
- Obstructive liver disease
- Obesity
- Diabetes mellitus
- Pregnancy
- Obstructive liver disease
- Acute hepatitis
- Systemic lupus erythematosus
- AIDS (protease inhibitors)
# Dietary sources of Cholesterol

<table>
<thead>
<tr>
<th>Type of Fat</th>
<th>Main Source</th>
<th>Effect on Cholesterol levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monounsaturated</td>
<td>Olives, olive oil, canola oil, peanut oil, cashews, almonds, peanuts and most other nuts; avocados</td>
<td>Lowers LDL, Raises HDL</td>
</tr>
<tr>
<td>Polyunsaturated</td>
<td>Corn, soybean, safflower and cottonseed oil; fish</td>
<td>Lowers LDL, Raises HDL</td>
</tr>
<tr>
<td>Saturated</td>
<td>Whole milk, butter, cheese, and ice cream; red meat; chocolate; coconuts, coconut milk, coconut oil, egg yolks, chicken skin</td>
<td>Raises both LDL and HDL</td>
</tr>
<tr>
<td>Trans</td>
<td>Most margarines; vegetable shortening; partially hydrogenated vegetable oil; deep-fried chips; many fast foods; most commercial baked goods</td>
<td>Raises LDL</td>
</tr>
</tbody>
</table>
Good vs. Evil

• HDL is the “good” cholesterol

• LDL is the “bad” cholesterol

**HDL**: You want this **High**

**LDL**: You want this **LOW**

**Triglycerides** are another type of fat in the blood that needs to be controlled
Goals for Lipids

**LDL**
- < 100 → Optimal
- 100-129 → Near optimal
- 130-159 → Borderline
- 160-189 → High
- ≥ 190 → Very High

**HDL**
- < 40 → Low
- ≥ 60 → High

**Serum Triglycerides**
- < 150 → normal
- 150-199 → Borderline
- 200-499 → High
- ≥ 500 → Very High
Some of the things outside of your control can include:

- Age
- Gender
- Family History
There are some things, however, that are well within your control, such as:

- Diet
- Weight
- Physical Activity
Lower Down CHOLESTEROL

LDL LEVELS
BLOOD CONCENTRATIONS
HEART DISEASE
MOLECULES
PARTICLES
ACIDS
CELLS
HIGH HDL
LDL
TRIGLYCERIDES
ATHEROSCLEROSIS
BILIARY TRACT DISORDERS
HEPATOPATHY
HEPATIC SYNDROME
LIVER DISEASES
FATTY LIVER DISEASE
FIBROSIS
HEPATOCELLULAR CARCINOMA
ALCOHOL-INDUCED LIVER DISEASE
LIVER CIRRHOSIS
BILIARY TRACT COMPLAINTS
HEPATIC CONGESTION
HEPATIC EDEMA
HEPATIC HYPERPLASIA
HEPATIC STEATOSIS
HEPATIC TUMORS
HEPATIC ABSCESSES
LIVER REMOVAL
LIVER TRANSPLANTATION
LIVER DISEASES
Primary Prevention

- Staying active
- Maintaining a healthy body weight
- Eating a Healthy Diet
  - +fruits/vegetables/whole grain (fiber)
  - -Saturated fats
  - -Cholesterol (animal fats)
- Management of other chronic conditions:
  - Diabetes
  - Hypothyroidism
  - Chronic Kidney Disease

Secondary Prevention

- Incorporating primary prevention factors
  - Exercise
  - Weight loss
  - Dietary Changes
  - Chronic Disease Management
- Medication therapy
  - Statins
- Smoking Cessation
Care Management Contributions

• Help patients to understand the importance of preventative factors such as:
  – Diet
  – Exercise
  – Smoking Cessation

• Identify barriers to medication adherence

• Self-management: follow-up and monitoring goals

• Communication with providers: what are their target numbers???
Resources:

- http://www.ksw-gtg.com/heart360/guide/pubData/mobile/index.htm#

- http://www.heart.org/HEARTORG/Conditions/Cholesterol/Cholesterol_UCM_001089_SubHomePage.jsp
Congestive Heart Failure
CHF
Congestive Heart Failure (CHF)

• Happens when the heart is not able to pump enough blood throughout the body.

• Fluid can back up into the lungs or other parts of the body (legs, feet or belly)

• Can range from mild (most common) to severe
Right Sided Failure

- Legs and ankles swell
- Soreness/swelling on the right side of your belly
- Fatigue
- Poor appetite
Left Sided Failure

- Fluid backs up into the lungs
- Shortness of breath at rest
- Dry hacking cough
- Difficulty sleeping unless propped up on pillows (2 or more)
Risk Factors

- Hypertension
- Myocardial Infarction (Heart Attack)
- Diabetes
- Sleep Apnea
- Cardiomyopathy (Enlarged Heart)
- Abnormal Heart Valves
- Family History
Treatment Overview

• Diagnostic testing helps drive the treatment plan
  – **EKG**
  – **ECHO** - An Ultrasound of your heart
  – **Exercise Test** (stress test) how heart responds to activity

• Diet: low sodium, cardiac diet
• Medication therapy
• Other lifestyle changes
• Self-management education
Medication Therapy

**Diuretics** *(water pill)*
- helps decrease the amount of blood your heart has to pump

**ACE inhibitors and ARB’s**
- relaxes blood vessels over time helps to decrease the workload on the heart

**Beta and Alpha blockers**
- decrease the workload on the heart

**Digoxin**
- help control heart rate

**Anti-Platelet**
- *(blood thinners)* help prevent clots
Self-Management is Key!!!
Care Managements Role

- Barriers
- Patient tools
- Health Coaching
- Collaboration and Communication
Help Patients Understand the Red Flags of Congestive Heart Failure
**Green Zone**
This zone is your goal

Your symptoms are under control. You have:
- No shortness of breath.
- No weight gain of more than two pounds.
- No swelling in your feet, ankles, legs or stomach.
- No chest pain.

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**Yellow Zone**
Caution: This zone is a warning

Call you doctor's office if:
- You have a weight gain of two or more pounds in one day or a weight gain of four pounds or more in one week
- You have increased shortness of breath.
- You experience more swelling of your feet, ankles, legs or stomach.
- You feel more tired and lack energy.
- You have a dry or moist hacking cough.
- You experience dizziness.
- You feel uneasy; you know something is not right.
- It is harder for you to breathe when lying down; you need to sleep sitting up in a chair.
- If any of the above symptoms is severe or getting worse, call 911 or go to your hospital’s emergency room.

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**Red Zone**
Emergency

Go to the emergency room or call 911 if you have any of the following:
- Difficulty breathing; unrelieved shortness of breath while sitting still.
- Chest pain.
- Confusion or inability to think clearly.
Ask Open-Ended Questions:

• How often do you weigh yourself

• How do you know when Congestive Heart Failure is not in control?
  • How do you take your medications?
    • How do you track your breathing or swelling day-to-day?
Vascular Diseases
Atherosclerosis & Peripheral Artery Disease

• What is happening?
  – Build up of plaque
  – Narrowing the vessels
  – Decreasing blood flow

• Disease Can Offer in the:
  – Heart
  – Brain
  – Kidneys
  – Eyes
  – Limbs
Uncontrollable Risk Factors
- Gender
- Age
- Family history
- Previous stroke
- Ethnicity

Primary Risk Factors
- Cigarette smoking
- Lack of exercise
- High blood pressure
- High cholesterol
- Diabetes
- Obesity
Primary Prevention
Secondary Prevention

• Diabetes Management matters!!

• Manage Hypertension –
  – Blood pressure goal: less than 120/80

• Manage Sleep Apnea
  – Barriers to therapy compliance

• Cholesterol Control

• Smoking Cessation Goals

• Routine Follow-up Care

• Medication adherence/barriers
Great Resources for Care Managers:

• American Heart Association

• CDC website

• American Diabetes Association
Questions