Chronic Condition Management

Heart Failure

Chronic Obstructive Pulmonary Disease

Objectives

Develop an understanding of specified chronic conditions prevalent in the MFP population and the needed self-management including medication management and red flags that signal a worsening of condition or emergent situation (crisis)

Topics:

- Heart Failure (HF)
- Chronic Obstructive Pulmonary Disease (COPD)
MFP Statistics

80% of adults over 50 have at least one chronic condition

MFP Participants
- 27% have HF
- 37% have COPD

DMH
- 23% have HF
- 36% have COPD

DRS
- 24% have HF
- 37% have COPD

DOA
- 34% have HF
- 38% have COPD

Heart Failure
Chronic Condition Management
Heart Failure (HF) Facts

WHO:
- Around 5.7 million people in the U.S. have heart failure
- Heart Failure was a contributing cause in > 280,000 deaths/year or 1 in 9 deaths/year
- Half of persons with Heart Failure will die within 5 years of diagnosis

WHAT:
- Heart failure is a serious condition that there is no cure for
- Once diagnosed, medicines and self-management are needed for the rest of the person's life

WHERE:
- Hospitalizations for heart failure have increased substantially. They rose from 402,000 to 1,101,000 (1979 to 2004)

Heart Failure: Definition

- The normal heart is a strong, muscular pump
- Heart failure is a chronic, progressive condition in which the heart muscle has become weakened and is not able to pump effectively
2 Types of Heart Failure

- Left sided failure
  - The heart muscle cannot pump blood out of the heart effectively

- Right sided failure
  - The heart cannot fill with blood effectively because the heart muscle is too stiff.

Consequence...
The heart is not capable of providing oxygen rich blood to vital organs of the body

Causes of Heart Failure

- High Blood Pressure
- Diabetes
- Irregular Heart Beat
- Heart Attack
- Heart Valve Disease
- Excessive Alcohol Intake
- Infection or Illness
Symptoms of Heart Failure

Knowing how to identify the symptoms will help manage heart failure!

- Sudden weight gain
- Swelling in feet, ankles, or bloating of your belly
- Feeling light-headed or dizzy
- Shortness of breath, especially with activity or when lying down
- Loss of appetite
- Dry hacking cough, that is worse at night
- Overall tiredness or not feeling well

If any of these symptoms develop the participant should call their PCP the same day they develop

Testing for Heart Failure

The health care provider may order tests and procedures to help confirm and then monitor heart failure

- Diagnostic tests and procedures may include:
  - Blood testing (BNP)
  - Chest x-ray
  - Electrocardiogram (Abbreviated: ECG or EKG)
  - Echocardiogram (or "echo")
  - Exercise stress test
  - Nuclear heart scan
  - Cardiac catheterization

- "Ejection fraction" – a measurement of heart failure
  - How much blood the left ventricle pumps out with each contraction
    - A normal ejection fraction is between 55 and 70
    - An ejection fraction under 40 may be evidence of heart failure
  - HOW?--Can be measured with echocardiogram, cardiac catheterization, or nuclear stress testing
Goals of Treatment/Management

- Reduce and/or Prevent acute heart failure episodes
- Control signs and symptoms to prevent hospitalization
- Maintain kidney function
- Maintain/improve quality of life, physical function
- Maintain/improve heart functioning

Managing Heart Failure

Heart failure is managed with:
- Medications
- Monitoring
- Lifestyle Changes

- Medications
  Recommended for managing heart failure
- Monitoring
  - Keeping track of symptoms and notifying your health care provider of any sudden changes
- Lifestyle Changes
  - Quitting smoking
  - Avoiding alcohol and caffeine
  - Eating a heart healthy diet
  - Being physically active
  - Managing stress
- Surgery
  - Not frequently used to treat heart failure, but can be used to correct problems causing heart failure
How to take control of heart failure!

- Medications
- Monitoring
- Lifestyle changes

1. Medications

- Take medications exactly as prescribed
- Do NOT stop medications without consulting the provider and report any new symptoms

Commonly used medications*:

- ACE inhibitors (lisinopril)
- Angiotensin II receptor agonists (losartan)
- Anticoagulants (aspirin, warfarin)
- Beta-blockers (metoprolol)
- Calcium Channel blockers (diltiazem)
- Cardiac glycoside (digoxin or the brand name Lanoxin)
- Diuretics (hydrochlorothiazide, furosemide)
- Hydralazine (isosorbide dinitrate)
- Spironolactone

*Medications prescribed are determined by the cause of the heart failure
2. Monitoring

Keep a Log of daily weight, daily blood pressure, and symptoms (and take log to every MD visit)

- **Weigh DAILY**
  - Weigh every morning right when getting out of bed, after urinating, before any change in clothes, food or fluid
  - Report changes in weight to healthcare provider on same day:
    - Increase in 2 pounds overnight, or
    - Increase in 3 pounds in 5 days, 5 pounds in 7 days, or
    - Decrease of 3-5 pounds, they maybe becoming dehydrated.
- **Check your blood pressure daily and keep a log**
- **Log your symptoms (and/or changes in symptoms)**
- Monitor how much fluid you are drinking.
  (not all persons require a fluid restriction but if they get edema (swelling)—limit fluid to 2000 cc/day or 8.5 cups (cup = 8 ounces)

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3. Lifestyle Changes

- Quitting smoking

- Avoiding alcohol and caffeine
  - Decrease or if advance heart failure avoid alcohol.
  - Alcohol consumption should be limited to special occasions. (20 ounces of beer, 5 ounces of wine, 1.5 ounces of hard liquor)

- Eat a heart healthy low sodium diet

- Being physically active—Have an exercise plan!
  - low level of exercise 3-4 x a week and slowly increase. After a hospitalization, person may be a candidate for cardiac rehab.

- Manage stress

Low salt diet

- Sodium (salt) restriction: 2000 mg a day -- not more than 700 mg per meal
- Choose foods naturally low in salt:
  - Fresh fruits & vegetables
  - Fresh meat, poultry, fish
  - Canned vegetables that say “No Salt Added”
- Regularly check sodium content on food labels
- Most IMPORTANTLY...
  - Stop adding salt to food!!

Signs and Symptoms of Advancing Disease

- Getting tired very easily
  - Can not engage in any kind of activity (including ADLs) for very long, decreasing ability to exercise or even walk across the room
- Muscle weakness
- Nausea or anorexia (no appetite)
- Early satiety
  - Becomes full when eating very early and does not eat much
- Weight loss, unexplained
- Feeling tired and run down all the time (malaise)
- Sleep disturbance
- Confusion, impaired concentration
- Resting rapid heart rate (tachycardia)
- Decrease urination during the day and increased at night due to gravity and positioning (Daytime oliguria with recumbent nocturia)
- Cool extremities

Self-Management: Red Flags

Call PCP right away

- Weight gain of 3 pounds in 1 day, or 5 pounds in a week
- Difficulty breathing at rest
- Increased shortness of breath with activity
- Finding that you have to use more pillows to sleep at night so you can breathe better
- Restlessness
- Dizziness
Self-Management: Unstable

Requires emergent care (call 911):

- Trouble breathing: Shortness of breath that is worse than usual or not being relieved with rest or very rapid breathing (tachypnea)
- Sudden swelling in legs, feet, ankles, or hands
- Rapid heart beat
- Feeling like you might pass out, dizziness, pale and sweating
- Cough that won’t go away or produces pink foamy sputum
- Chest pain that won’t go away and is not relieved by Nitroglycerin
- Anxiety with a sense of suffocation
- Confusion

HF: Risk Questions and Mitigation Strategies

#12: Does the home environment make it difficult to move around ... or create a fire of health hazard?
- Indicator 139: Participant uses oxygen
  Strategy 67: post a notice “oxygen in use”

#18: Does the participant need assistance/adaptive devices to manipulate the home environment
  - Indicator 133: medical furniture
  - Indicator 130: ambulatory devices
  Strategies: medical equipment, necessary safety items
HF: Risk Questions and Mitigation Strategies

#37 & 38: Unplanned hospitalization/ED visits
Strategies: medication management, arrange education, provider visits

#44: Has the participant experienced a recent unplanned weight gain or loss:
- Indicator 280: heart failure and gained 5 pounds in one week
Strategy 113: Monitor for weight changes (weight log)

#45: Does the participant require a special diet?
- Indicator 251: special diet/diet requirements
- Indicator 267: fluid restriction
Strategy: 23: education on diet

HF: Risk Questions and Mitigation Strategies

#48 or 49: medication management
Strategies: review of medications, pill box or other device

#52: Does the participant have chronic chest congestion...or use cough/asthma medications?
- Indicator 265: Participant has a diagnosis/condition that leads to compromised lung function
Strategy 30: Home care nursing
OR

#56: Are there any other medical conditions that were not addressed in the questions above?
- Indicator 506: CHF
- Indicator 504: HTN
- Indicator 505: Renal failure
Strategy: Provide Or Arrange For Education, Guidance And Resources To Participant/family/caregivers On Self-management Of ...
**HF: Risk Questions and Mitigation Strategies**

Other risk questions that could apply depending upon the management and long-term effects of HF

**#26**: Does the participant have extreme food or liquid seeking behaviors that may cause injury to self?
- Indicator 174: history of eating disorder
- Indicator 218: fluid restrictions

Strategies: behavior contract, mental health services, physical exam, crisis/emergency contact

**#46**: lab testing

**#1-4**: Caregiver support

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**HF: Risk Questions and Mitigation Strategies**

Are there others that you, the TCs, have used? Comments? Questions?
**COPD**

Chronic Condition Management

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**Chronic Obstructive Pulmonary Disease**

- The word *Chronic* means *it won’t go away.*
- The word *Obstructive* means *partly blocked.*
- The word *Pulmonary* means *in the lungs.*
- The word *Disease* means *sickness.*

- *COPD* is caused by *long-term smoking* or breathing in dust, fumes, or harmful things. Symptoms can include shortness of breath, coughing, and wheezing.
COPD Definition

- A preventable and treatable lung disease with extrapulmonary effects that may contribute to severity in individual patients
- Characterized by airflow limitation that is not fully reversible
- Airflow limitation is usually progressive and associated with an abnormal inflammatory response to noxious particles or gases

http://www.goldcopd.com

MFP Statistics

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- 34% have HF
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MFP Mortality

- COPD appears to increase the risk of mortality by a factor of 2.4 compared to all MFP participants who transitioned and do not have COPD

Chronic Obstructive Pulmonary Disease (COPD)

- COPD includes three primary related respiratory diseases:
  - Chronic bronchitis and
  - Emphysema
  - Asthma
• Cigarette smoking is the **major risk factor** for developing COPD
• ~90% of COPD patients have a smoking history; however, only 15% of smokers develop clinically significant COPD


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**COPD symptoms**

- Dyspnea (difficulty breathing), Shortness of breath on exertion
- Chronic productive cough
- History of exposure to risk factor (tobacco smoke)
COPD Management

1. Monitor for changing symptoms

2. Reduce risk factors

3. Manage COPD: Inhaler medications and/or oxygen.

COPD 1. Monitor for changing symptoms

Changing Symptoms:

- Cough up thick mucus that is red, yellow, or green AND this is a change
- A temperature by mouth above 102°F (38.9°C)
- Breathing is not as good as you think it should be
- Breathing becomes worse when you walk or exercise.
Oxygen and smoking cessation may reduce rate of decline of pulmonary function.

We strongly encourage participants to quit smoking. Smoking contributes to heart and lung disease, delays healing, and increases your risk of infection. Smoking remains the leading cause of preventable death in the U.S.

For more information on quitting, call the Illinois Quit line at: 1-866-784-8937 and ask a nurse for information on quitting.
Oxygen

Medications Include:

- Anticholinergic Bronchodilators
- Combination Bronchodilators
- Long-Acting Beta-Agonists
- Theophylline

Managing COPD

* Stop smoking. Smoking makes it hard for the body to get oxygen and causes more damage to your lungs. Avoid Second-hand smoking, too.

* Drink enough water and fluids to help loosen any thick phlegm, use a humidifier or vaporizer.

* Take your medicine Bronchodilators. Know how to use inhalers the right way.

* Always talk to doctor about using cough syrup or other over-the-counter medicines.

* Get vaccines that can help prevent other lung problems.

* Eat healthy foods. Get to a healthy weight.

* Use home oxygen
  - as told by the doctor.
  - If you become confused, very weak, or feel faint or it is very hard to breathe or to catch your breath.
  - Your heart is beating faster than usual or skipping beats.

* Learn breathing exercises.
**COPD Exacerbations**

- **Definition:** “an event in the natural course of the disease characterized by a change in the patient’s baseline dyspnea (difficulty breathing), cough and/or sputum that is beyond normal day-to-day variations, is acute in onset, and may warrant a change in regular medication in a patient with underlying COPD”.

  GOLD guidelines, 2009

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**COPD Exacerbations**

- **Causes** are infection (viral and bacterial) and air pollution

- **Symptoms:** increased dyspnea, increased sputum (phlegm)

- **Treat** with oxygen, and medications (bronchodilators, corticosteroids, and antibiotics as needed)

  Bronchodilators - to relax the muscles around the airways.
  Corticosteroids - to reduce swelling and mucus production
  Antibiotics - to manage bacterial infections that can cause flare-ups.
**COPD: MFP related**

**Risk Questions and Mitigation Strategies**

**Risk #62.** Does Participant (Ptcp) Have Chronic Chest Congestion, Frequent Pneumonia, Rattling With Breathing, Persistent Cough Or Use Cough/asthma Medications

- **Indicator 265:** Ptcp has diagnosis that leads to compromised lung function (COPD)
- **Indicator 349:** Ptcp has difficulty using inhalers or breathing treatments
- **Indicator 330:** Ptcp needs caregiver support to administer inhalers or breathing treatment
- **Indicator 139:** Ptcp uses oxygen

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**Strategy 19:** Arrange for and monitor education on COPD, through approved program

**Strategy 22:** Arrange for and monitor education on the importance of taking medications as prescribed, proper administration, side effects and overdose precautions

**Strategy 62:** Arrange, verify and monitor appointments with healthcare provider for new onset or worsening symptoms

**Strategy 198:** Provider or arrange for education, guidance and resources on self-management of oxygen use

**Strategy 207:** Provide or arrange for education, guidance and resources to on self-management of COPD
COPD: MFP related Risk Questions and Mitigation Strategies

**Risk #12:** Does the home environment make it difficult to move around ...or create a fire of health hazard?

- **Indicator 139:** Participant uses oxygen
- **Strategy 67:** post a notice “oxygen in use”

HF: Risk Questions and Mitigation Strategies

Are there others that you, the TCs, have used? Comments? Questions?
Managing multiple chronic illnesses

Multiple chronic illnesses

42% of participants have 5 or more chronic medical and mental health conditions

CHRONIC ILLNESSES of participants

- 42% with Heart Disease
- 27% Heart Failure
- 27% Ischemic Heart Disease
- 10% A-Fibrillation
- 4% with Acute myocardial infarction (heart attack history)
- 37% with COPD (chronic lung disease)
- 47% with Diabetes
- 10% with Alzheimers/Dementia
- 53% with Depression
- 43% with Bipolar Disorder
- 46% with Schizophrenia
“Typical MFP transitioned chronically ill participants” by Agency

DMH
- 49 year old male who lived in current NF for 2.5 yrs
- A majority (51%) have 5 or more medical and mental co-morbidities
- Major chronic health conditions include diabetes, COPD, heart disease and SMI

DRS
- 52 year old male who lived in NF for over 2 years
- One-third has 5 or more medical or mental comorbidities
- Major chronic health conditions include diabetes, heart disease, COPD
- 63% have a MI diagnoses of depression

IDoA
- 72 year old female who lived in current NF for almost 2 years
- One-third has 5 or more medical or mental comorbidities
- Major chronic health conditions include heart disease, diabetes, and COPD
- 38% have a MI diagnoses of depression

Managing chronic illness “needs” by Agency

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<tr>
<th>DMH</th>
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<tbody>
<tr>
<td>Needs assistance taking or monitoring meds (96%)</td>
<td>Needs assistance with meals (80%)</td>
<td>Needs assistance taking or monitoring meds (67%)</td>
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<td>Requires regular lab tests (81%)</td>
<td>Taking 9 or more meds (76%)</td>
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<td>Taking 2 or more psychotropic drugs (70%)</td>
<td>Needs assistance taking or monitoring meds (75%)</td>
<td>Needs assistive or adaptive devices in the home (57%)</td>
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<td>Needs assistance with finances (60%)</td>
<td>Needs assistance with finances (63%)</td>
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<td>Lack of peer support system (53%)</td>
<td>Needs (escort) support to be in the community (58%)</td>
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<td>Suffers from chronic pain (57%)</td>
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<td>Needs support to be in the home alone (56%)</td>
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<td>Needs assistance with ambulation and toileting (54%)</td>
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<td>Needs assistance with transferring (50%)</td>
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Managing Chronic Illness Needs

“Typical” Participants Needs

- Needs assistance taking or monitoring meds (82%)
- Taking 9 or more meds (59%)
- Requires regular lab tests (56%)
- Needs assistance with finances (54%)

Managing your chronic illness -
“Needs assistance taking or monitoring meds (82%)”

HOW TO MANAGE:
Go to ‘MFP Web App’ > “MFP Web” > “Education materials” “Medications”

Documents/Resources provided:

- Medication Chart Review (PowerPoint): This outlines the process of reviewing an MFP participant’s medication chart.
- Medication Management (PowerPoint): This outlines common issues related to medication management including safety, scheduling and disposal, among others. An example case study is used to illustrate common issues.
- About Medication Management (Handout): This handout is for MFP participants and their caregivers to review some of the common issues regarding medication management.
- Medicines and You: 19-page booklet developed by the U.S. Dept of Health and Human Services
- Prevention of Medication Mishaps: Easy to read Presentation developed by the National Family Caregivers Association
- Medications Made Easy: Information provided by AARP
- Information about taking Potassium
- Information About (Warfarin) Coumadin Handout
- Information about Lovenox from the manufacturer
### Managing multiple chronic illnesses

#### Self-Management activities

- **Managing Diabetes alone**
  (blood glucose log)

#### Weekly Blood Glucose Log

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- **Managing Diabetes & Heart Failure**
  (Blood glucose log AND daily weight)

#### Diabetes: Weekly glucose LOG

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#### Heart Failure

### Managing multiple chronic illnesses

#### Lifestyle changes

**Smoking:** encourage smoking cessation
- COPD: decreased lung function and risk for infection
- CHF: exacerbation of condition secondary to decreasing lung function and vasoconstriction from nicotine
- Diabetes: elevated blood sugar due to respiratory or other infection
- CAD: increased risk for a heart attack

**Sedentary lifestyle:**
- COPD: decreased lung function
- CHF: decreased heart functioning
- Diabetes: elevated or difficult to control blood sugar
- CAD: increased risk for heart attack
Managing multiple chronic illnesses
Lifestyle changes continued

Diet and fluid intake: encourage a healthy diet with monitoring of fluid intake
- COPD: adequate fluid thins secretions
- CHF: too much fluid or salt results in fluid retention, edema and flare of CHF
- Diabetes: management of blood sugar levels and prevention of infections
- CAD: decreases risk of plaque formation and heart attack

Alcohol consumption: encourage limitation of cessation of alcohol
- COPD: causes dehydration and secretions will thicken
- CHF: caused further damage to the heart muscle
- Diabetes: initially will result in elevated blood sugar but then it will fall
- CAD: increases risk for heart attack

Managing multiple chronic illnesses
Medical management

Participant should work with PCP and/or specialty providers to determine frequency of appointments: Encourage participant to keep all appointments; accompany participant to appointment
- Medications: Running out of medications for one condition can negatively affect another condition(s).
- Not using inhalers for COPD or taking medications will increase risk of COPD exacerbation and put the participant at high-risk for CHF flare or heart attack.
- Missing medications for blood pressure can cause CHF flare, heart attack or stroke.
- Immunizations: It is important for participants to stay up-to-date on pneumovax and fluogen.
- Acute illness can result in flare of COPD, CHF, elevated blood sugar levels.

Controlling blood pressure and other conditions can limit exacerbations of conditions and improve quality of life.
Consequences of chronic illness
How one chronic illness causes others

- **Heart Failure** complications include: kidney damage/failure, heart valve problems, liver damage, heart attack, and stroke

- **HTN Crisis (BP over 180/120)** complications include stroke, kidney failure, heart attack, and heart failure

- **Diabetes** complications include: diabetic neuropathy, nephropathy, diabetic retinopathy, and microvascular disease.

References: CHF

- [http://www.cdc.gov/DHDSP/library/fs_heart_failure.htm](http://www.cdc.gov/DHDSP/library/fs_heart_failure.htm)
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Resources for Guidelines on COPD

- American Lung Association
  Standards for the Diagnosis and Management of Patients with COPD

- Global Initiative for Chronic Obstructive Lung Disease
  http://www.goldcopd.com

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