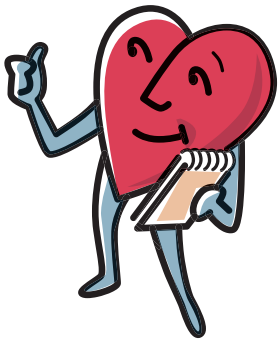




calendar companion

living
with
heart failure



a patient teaching guide

living with heart failure

a patient teaching guide

how to use this teaching guide

This pocket guide was created to help nurses educate heart failure patients about their condition and designed to be used with the accompanying patient self-management educational calendar, “You Can Live with Heart Failure – Healthy Habits for Life.” There are a number of self-management skills the heart failure patient should know prior to leaving the hospital, and this guide will help the nurse when teaching these skills to patients.

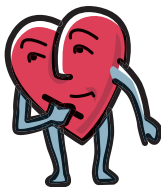
The guide is organized by teaching topic and each topic begins with the corresponding calendar messages by month. Within each topic there are two sections – “what the nurse needs to know” and “what the patient needs to know.” The first section for the nurse includes pathophysiology and current, evidence-based treatment information to enhance the knowledge of the nurse/healthcare provider. The nurse should become familiar with this section prior to using this guide for patient teaching. The second section includes essential points to cover when teaching the patient to manage their disease through various lifestyle practices. The patient section is written in language that should be easy for the patient to understand. As each topic is taught, refer to the messages on the calendar that correspond to that topic. When patients read the calendar messages at home, the phrases should be familiar and remind them of the other key learning points. Emphasize to patients that they are in control of making lifestyle changes that will help them manage their disease.

Prior to discharge, patients need to understand the importance of:

- ✓ using the calendar to record their weight and how they feel daily.
- ✓ following a low-sodium diet.
- ✓ taking their medications and managing common side effects.
- ✓ staying active.
- ✓ understanding common symptoms and what to do about them including when to seek immediate help.



definitions of common terms	2
activity.....	4
diet	7
the importance of daily weights	12
common medications used for treating heart failure.....	14
smoking cessation.....	23
follow-up with healthcare providers	24
what to do if symptoms worsen	26
reading a food label.....	28



definitions of common terms

heart failure is an illness that cannot be cured. with careful management it can be brought under control. patients need to know that heart failure can progress even though their symptoms may improve. this means that the patient should:

- ✓ follow a low sodium(salt) and low fat diet
- ✓ remain physically active
- ✓ weigh themselves daily
- ✓ take all medicines ordered by their healthcare provider
- ✓ stop smoking
- ✓ keep follow-up appointments

heart failure

- ✓ pumping action of the heart is inadequate
- ✓ blood backs up into the lungs, making breathing difficult (*left-sided failure*)
- ✓ blood also backs up into the veins, causing swollen legs and feet (*right-sided failure*)
- ✓ also known as Congestive Heart Failure

common causes

- ✓ coronary artery disease
- ✓ cardiomyopathy (*an enlarged heart due to many different causes*)
- ✓ myocarditis (*inflammation of the heart muscle*)
- ✓ heart valve dysfunction
- ✓ high blood pressure
- ✓ pulmonary disease (*increases stress on the heart*)

heart failure signs and symptoms

- ✓ fatigue
- ✓ paroxysmal nocturnal dyspnea (*waking up gasping for breath*)
- ✓ orthopnea (*shortness of breath when lying down*)
- ✓ dyspnea on exertion (*shortness of breath with activity*)
- ✓ anorexia (*loss of appetite*) and abdominal complaints
- ✓ lower extremity edema (*swelling of the feet and legs*)

ejection fraction

- ✓ the percentage of blood that is pumped out of the heart each time it beats
- ✓ an assessment of heart function
- ✓ normal is 55-65%
- ✓ most commonly determined by an echocardiogram and/or nuclear medicine studies

calendar messages

- *everyday activities are a great way to keep moving. (january)*
- *do something healthy everyday to relax. (february)*
- *with your healthcare provider's okay, walk up to 30 minutes everyday. (may)*
- *be active but be smart. stop and rest when you get tired. (september)*

what the nurse needs to know

aerobic activity has been shown to slow or reverse ventricular remodeling (the hypertrophy or dilatation) that occurs in response to increased myocardial stress, which in turn will improve cardiac function.

exercise can improve peak O_2 consumption and restore the abnormal autonomic, neurohormonal, and hemodynamic functions that occur in heart failure due to sympathetic nervous system (SNS) stimulation.

SNS stimulation leads to vasoconstriction causing hypertension and increased workload on the heart, as well as increased cortisol levels, which can elevate blood glucose.

burning excess calories can help optimize weight.

what the patient needs to know

- ✓ exercise helps your heart be more efficient:
 - improves muscle tone, including your heart muscle
 - decreases stress
 - increases energy
 - improves circulation
 - controls weight
 - lowers cholesterol
 - lowers blood pressure
- ✓ research shows that activity including exercise, work, and sex is healthy and safe for most people with heart failure.
- ✓ everyday activities (walking, vacuuming, gardening, walking in the mall, chair exercises) are a great way to keep moving.
- ✓ check with your healthcare provider prior to starting an exercise program or increasing your current activity level; ask if cardiac rehab referral would be right for you.

what the patient needs to know (cont'd)

- ✓ the key to becoming active is to start slowly
 - the goal is to be active at least 30 minutes most days of the week. it doesn't have to be 30 minutes in a row; for example, it could be three 10-minute blocks of activity.
- ✓ walking is good exercise. start with 5 minutes and work your way up to 30 minutes everyday.
- ✓ it is important to be active, but be smart: stop and rest when you get tired. you should be able to carry on conversation during the activity – if you cannot, you may be working too hard and should slow down.
- ✓ do something healthy everyday to relax and reduce stress. activities such as reading, yoga, hobbies such as crafts, are all ways to decrease the effects of stress on your heart.
- ✓ do not exercise or increase activity if you are short of breath at rest, feel exhausted, have a fever or feel ill, have chest pain, or are going through a major change in your medication regimen.



calendar messages

- *eat whole grains, fresh fruit and veggies everyday. (march)*
- *think fresh! avoid canned and processed foods that have a lot of salt and fat. (august)*
- *use herbs and spices instead of salt when cooking and seasoning food. (november)*

what the nurse needs to know

one of the most important effects of lowered cardiac output in heart failure is a reduction in renal blood flow and glomerular filtration rate, which leads to sodium and water retention.

with decreased renal blood flow, there is a progressive increase in renin secretion by the kidneys along with parallel increases in circulating levels of angiotensin II. increased angiotensin II contributes to vasoconstriction and stimulates aldosterone production by the adrenal cortex.

aldosterone increases tubular reabsorption of sodium with an accompanying increase in water retention. angiotensin II also increases the level of antidiuretic hormone, which also contributes to vasoconstriction and inhibits water excretion.

what the patient needs to know

✓ sodium/salt

- heart failure causes the body to hold on to sodium, which causes extra fluid to build up in the body. extra fluid makes the heart work harder
- check with your healthcare provider to find out what your daily intake of sodium limit should be – typically 1500-2000 mg a day. a teaspoon of salt contains about 2300 mg of sodium

✓ ways to reduce salt/sodium intake

- take the salt shaker off the table. remember salt is salt whether sea or kosher it is still salt
- choose fresh foods when possible-avoid processed or smoke – cured foods
- don't add salt when cooking – try different herbs and spices to season food, for example: garlic POWDER, black pepper, basil, chives, parsley, paprika, dill, sage, curry, chili powder, thyme, lemon juice, vinegar, Mrs. Dash® Salt-Free Seasoning Blends
- look for low sodium versions of foods you like

- examples of low-sodium foods:
 - beans, peas, rice, lentils, or whole wheat pasta (dried and fresh, cooked without salt)
 - fruits (fresh, frozen, or canned in juice – avoid heavy syrup)
 - fresh meats, poultry, and fish
 - milk
 - vegetables (fresh and plain frozen)
 - yogurt
- read food labels for sodium/salt content – food items in a bottle, a can or a box contain preservatives which are high in salt
- avoid high sodium/salt seasonings such as barbecue sauce, soy sauce (even “lite” soy sauce), dry salad mixes, garlic salt, taco seasoning, onion salt, ketchup, seasoned salt, pickle relish
- examples of high sodium foods:
 - bacon
 - lunch meats
 - sausage
 - chipped beef
 - hot dogs
 - canned meats/fish/beans
 - canned vegetables/soups

what the patient needs to know (cont'd)

- jarred/canned tomato sauce
- sauerkraut
- popcorn

- check with your healthcare provider before using salt substitutes; do not use them if you have kidney disease since they contain potassium

✓ fat

- extra weight makes the heart work harder
- limit fat intake and ask your healthcare provider about ways to control your weight

✓ ways to reduce fat intake

- use the food pyramid as a guide for portion sizes (www.mypyramid.gov)
- choose lean meats, poultry, and fish and cut visible fat and skin off
- avoid fried foods
- check food labels for fat content

✓ total cholesterol

- people who have a total cholesterol level of 240 mg/dl or more have twice the risk of coronary heart disease as those whose cholesterol level is at 200 mg/dl
- after a heart attack recommended cholesterol is 170 mg/dl or less

✓ HDL vs LDL Cholesterol

- HDL (high density lipoprotein) is the good cholesterol
- HDL levels of 60 mg/dl or higher give some protection against heart disease
- LDL (low density lipoprotein) is the bad cholesterol
- an optimal level of LDL is less than 100 mg/dl. higher levels are considered a risk factor



calendar messages

- *weigh yourself at the same time everyday and record your weight. (july)*
- *call your healthcare provider IF you gain 2 pounds in a day or 5 pounds in a week. (october)*

what the nurse needs to know

weight gain may be an early sign that fluid is accumulating in the patient's vascular system or tissues. a person can retain 8 to 15 pounds of fluid before swelling, shortness of breath, or other symptoms occur. two pounds is equivalent of one liter of fluid.

- ✓ ask the patient if they have a scale at home.
- ✓ make sure the patient has an accurate "dry weight" – their weight on the day of discharge.

what the patient needs to know

- ✓ a rapid weight gain without a change in the amount you usually eat may be a sign that your body is holding onto fluid and your treatment plan may need to be changed.
- ✓ having a scale at home is vital to the success of your treatment plan.
- ✓ write down your starting weight (weight at discharge from the hospital) on the calendar.
- ✓ hang the calendar in the same room where you keep your scale.
- ✓ weigh yourself first thing in the morning everyday at the same time, on the same scale, wearing the same amount of clothing, and after urinating.
- ✓ record your weight each day on the calendar.
- ✓ take this calendar with you every time you go to see your healthcare provider.
- ✓ call your healthcare provider if you gain 2 pounds in one day or 5 pounds in a week.



calendar messages

- *take all your medicines even when you feel well. never skip doses.*
(december)

what the nurse needs to know

some of the most common medications used to treat heart failure include:

- ✓ *Diuretics (water pills)* – also known as: hydrochlorothiazide (HydroDIURIL[®]), chlorothiazide (Diuril[®]), furosemide (Lasix[®]), bumetanide (Bumex[®]), spironolactone (Aldactone[®]), triamterene (Dyrenium[®]), metolazone (Zaroxolyn[®]), torsemide, indapamide, polythiazide, amiloride, combination agents (Dyazide[®]) work by causing the kidneys to remove more sodium and water from the bloodstream than usual for elimination by the kidneys. less circulating volume, or preload, decreases the workload on the heart. they literally work by helping the body to get rid of excess fluid that can accumulate in the lungs or the periphery. sometime these medications cause the potassium level to drop, so this should be checked periodically. they may also cause dehydration. advise the patient to take these at the same time every morning.

- ✓ *ACE (Angiotensin Converting Enzyme) Inhibitors* – also known as: captopril (Capoten[®]), enalapril (Vasotec[®]), ramipril (Altace[®]), lisinopril (Prinivil[®], Zestril[®]), quinapril (Accupril[®]), fosinopril (Monopril[®]), benazepril (Lotensin[®]), moexipril (Univasc[®]), trandolapril, perindopril block the body from converting angiotensin I to angiotensin II, which is a powerful vasoconstrictor. increased vasoconstriction, or afterload, increases the workload on the heart ACE Inhibitors block the effect of stress hormones that make the heart work harder and cause high blood pressure. Side effects include dizziness from low blood pressure, dry cough and less commonly angioedema or swelling of the lips, tongue or throat.

- ✓ *Digitalis preparations* – also known as: digoxin (Lanoxin[®]), digitoxin, as a positive inotrope, increases the force of the heart's contractions while simultaneously slowing the heart rate. they make the heart beat stronger thereby alleviating heart failure symptoms. Side effects include nausea, vomiting, blurred or abnormally colored vision, palpitations, or a markedly slow heart rate that may lead to dizziness or blackouts.

what the nurse needs to know (cont'd)

- ✓ *Beta-blockers* – also known as: carvedilol (Coreg[®]), metoprolol (Lopressor[®], Toprol XL[®]), atenolol, bisoprolol, labetalol, propranolol, sotalol, pindolol, penbutolol, acebutolol, timolol, nadolol, and betaxolol block the beta-receptors on heart cells, which when stimulated make the heart rate increase. this increase in heart rate is the body's way to compensate for a failing heart, but increases the heart's workload and subsequently can worsen heart failure. most common side effects include feeling tired or dizzy.
- ✓ *Angiotensin II receptor blockers (ARBs)* – also known as: losartan (Cozaar[®]), valsartan (Diovan[®]), irbesartan (Avapro[®]), candesartan, eprosartan, telmisartan, olmesartan actually block the effects of angiotensin II on the cardiovascular system, there by reducing vasoconstriction. the actions of ARBs are almost the same as ACEI. they block the effects of stress hormones on the cardiovascular system, and have similar side effects as ACE inhibitors. ARBs generally do not cause a dry cough.
- ✓ *Vasodilators* – also known as: isosorbide dinitrate (Isordil[®]), nesiritide (Natreacor[®]), hydralazine (Apresoline[®]), nitrates, minoxidil cause the blood vessels to relax to decrease afterload, this improves blood flow and decreases the workload on the heart.

- ✓ *Anticoagulants* – also known as: warfarin (Coumadin[®]), heparin. interfere with the body's clotting mechanisms to prevent clots in patients at risk, particularly those with atrial fibrillation. patients should avoid activities where injury is possible since blood thinners can cause bleeding. they should ask their healthcare provider how often they should have labwork to check the effects of these medications. they should also avoid dark leafy green vegetables as these are high in Vitamin K which contributes to clotting.

- ✓ *Cholesterol Lowering Agents* – the drugs of first choice for elevated LDL cholesterol are the HMG CoA reductase inhibitors, e.g., atorvastatin, fluvastatin, lovastatin, pravastatin, rosuvastatin and simvastatin. Statin drugs are very effective for lowering LDL cholesterol levels and have few immediate short-term side effects. another class of drugs for lowering LDL is the bile acid sequestrants—colesevelam, cholestyramine and colestipol—and nicotinic acid (niacin). these have been shown to reduce the risk for coronary heart disease in controlled clinical trials. both classes of drugs appear to be free of serious side effects, but both can have troublesome side effects and require considerable patient education to achieve adherence. nicotinic acid is preferred in patients with triglyceride levels that exceed 250 mg/dL because bile acid sequestrants tend to raise triglyceride levels.

what the patient needs to know

key points about medications

- ✓ medications are an extremely important part of your therapy for heart failure.
- ✓ most patients will require multiple medications to manage the disease.
- ✓ medications started in the hospital may have to be changed according to how you respond to them.
- ✓ never change or skip doses without consulting your healthcare provider.
- ✓ at your follow-up appointments, let your healthcare provider know if you think there are any problems with your medicines, even if they seem simple or minor.
- ✓ using a pillbox is one of the best ways to remember to take all medicines everyday – they are available at most pharmacies.
- ✓ a medication chart is also a helpful way to remember to take your medications.
- ✓ taking all prescribed medicines as directed will help you to stay well and out of the hospital.
- ✓ if you are taking all medications as directed and feel worse, you need to contact your healthcare provider as soon as possible.

- ✓ you should contact your healthcare provider if you think you are experiencing side effects (such as dizziness – could be due to low blood pressure).

common medications

- ✓ *Diuretics (water pills)*
 - helps your body to get rid of excess water in the lungs or extremities
 - decreasing fluid in your lungs will help you breathe easier
 - decreases swelling in your ankles and legs
 - makes you urinate more often
 - take your water pill at the same time every morning
 - common side effects include:
 - dizziness
 - severe weakness
 - leg cramps (may be from low potassium)
 - call your healthcare provider if you have any side effects

what the patients needs to know (cont'd)

✓ *ACE (Angiotensin Converting Enzyme)*

Inhibitors

- help relax your blood vessels (lower blood pressure) and makes it easier for the heart to pump
- common side effects include:
 - dizziness (blood pressure may be too low)
 - dry cough
 - problems with the potassium level
 - swelling in your lips, tongue or throat
- contact your healthcare provider if you have any side effects

✓ *Digitalis preparations*

- improves heart function by making your heart beat stronger
- common side effects include:
 - nausea or vomiting
 - blurred or yellow-tinted colored vision
 - irregular heartbeat
 - slow heart rate that may lead to dizziness or blackouts
- contact your healthcare provider if you have any side effects

✓ *Beta-blockers*

- lowers blood pressure and slows down your heart rate
- common side effects include:
 - feeling tired or dizzy due to lower heart rate and blood pressure
- contact your healthcare provider if you have any side effects

✓ *Angiotensin II receptor blockers (ARB)*

- help relax your blood vessels (lower blood pressure) and makes it easier for the heart to pump
- may be prescribed instead of ACE inhibitors
- common side effects include:
 - dizziness (blood pressure may be too low)
 - problems with the potassium level
- contact your healthcare provider if you have any side effects

✓ *Vasodilators (Nitrates)*

- improve blood flow by relaxing blood vessels

what the patients needs to know (cont'd)

- decrease the workload on the heart
- common side effects include:
 - dizziness
 - headaches
 - nausea and vomiting
- using medications for erectile dysfunction when you are taking vasodilators can cause a serious drop in blood pressure, so check with your healthcare provider before taking these when on vasodilators

✓ *Anticoagulants*

- help to prevent blood clots
- ask your healthcare provider what activities to avoid since blood thinners can cause bleeding
- ask your healthcare provider how often they should have labwork to check the effects of these medications
- dark leafy green vegetables (i.e. spinach, kale) should be avoided as they could decrease the effect of this medicine



calendar messages

- *smoking makes your heart work harder. get help to quit. (june)*

what the nurse needs to know

smoking (specifically nicotine) causes blood vessels to constrict, making the heart work harder, and increasing blood pressure. it also depletes the body of oxygen, replacing it with carbon monoxide and other poisonous gases.

what the patient needs to know

- ✓ smoking makes your heart work harder and makes your heart failure worse.
- ✓ quitting smoking is one of the most important things you can do to improve your health.
- ✓ get help to quit. ask your healthcare provider about medications that can help you quit smoking.
 - provide smoking cessation materials to the patient, including information about what the local Health Department provides in terms of smoking cessation programs
 - www.smokefree.gov or 1-800-QUITNOW is a resource



calendar messages

- *keep appointments with your healthcare provider even when you feel well. (april)*

what the nurse needs to know

heart failure can progress even if the patient's symptoms remain the same. it is essential that patients go to the post-discharge appointment and subsequent appointments, even if they are feeling better. the goal is for them to feel as good as they can. regular visits to their healthcare provider can help that happen and help keep them out of the hospital.

treatment in the hospital stabilizes their condition. follow-up care is for on-going medical management and further teaching to help the patient learn ways to manage their condition.

what the patient needs to know

- ✓ heart failure can progress even if your symptoms remain the same.
- ✓ the goal is to feel as good as you can, and regular visits to your healthcare provider can help make that happen and help keep you out of the hospital.
- ✓ keep all appointments with your healthcare provider, even when you feel well.
- ✓ know your healthcare provider's name and phone number.
- ✓ take your calendar with you to your appointments and show your healthcare provider.
- ✓ make sure you know the time and date for your first appointment with your healthcare provider before you leave the hospital.
- ✓ if you do not have a primary care physician or if you have financial concerns, a Social Work or Care Management consult will be arranged prior to discharge.



what the nurse needs to know

- ✓ reinforce with patients that they need to contact their healthcare provider if they start to feel badly, and are experiencing symptoms such as:
 - unusual shortness of breath
 - swelling of extremities
 - sudden weight gain
 - increased fatigue
- ✓ they may be experiencing a decrease in cardiac output, hypotension, renal complications, or medication side effects.

what the patient needs to know

- ✓ call your healthcare provider if you are having a bad day (yellow dot) or feel you might be having side effects from your medicines:
 - if you gain 2 pounds in a day or 5 pounds in a week
 - increase in the swelling in your ankles or legs
 - more short of breath or new shortness of breath
 - new need to sleep with additional pillows
 - new need to sleep sitting up in a chair
 - dizziness, nausea & vomiting, cramps in your legs, dry hacking cough
 - increasing tiredness
- ✓ call 911 if you are having a worse day (red dot) and cannot reach your healthcare provider:
 - struggling to breathe when sitting up
 - chest pain



reading a food label for sodium content

- ✓ begin by reviewing the serving size and sodium content information. see the shaded areas on the sample label to the right.

the serving size for the food on this label is 5 oz. (ounces). the sodium content for that serving is 440 mg.

remember that daily sodium intake should be 2000 mg or less.

- ✓ if you eat the same size serving as the one listed on the label, then you are eating the amount of sodium that is listed.
- ✓ but if the amount you actually eat is either larger or smaller, the amount of sodium you will be eating will also be larger or smaller.

for example, if you eat a double portion of the food shown above, you will also be eating twice as much sodium as listed on the label. a 10 oz. serving of the food above would contain 880 mg of sodium.

use the label when you shop, as you plan your meals, and as you cook each day. the label makes it easy to determine the amounts of nutrients you're getting and to compare one product to another.

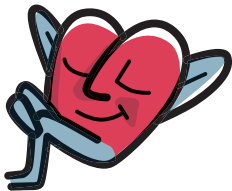
Nutrition Facts	
Serving Size 5 oz	
Servings Per Container 4	
Amount Per Serving	
Calories 90	Calories from Fat 30
% Daily Value*	
Total Fat 3g	5%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 440mg	19%
Total Carbohydrate 13g	4%
Dietary Fiber 3g	4%
Sugars 3g	
Protein 3g	
Vitamin A 80%	Vitamin C 60%
Calcium 4%	Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or depending on your calorie needs:

More nutrients may be listed on some labels.

selected resources

- Albert, N. and Zeller, R. (Spring 2007). Development and testing of the survey of illness beliefs in heart failure tool. *Progress in Cardiovascular Nursing*: pp. 63-71.
- Porth, C.M. Ed. (2005). *Pathophysiology: Concepts of Altered Health States*. (7th Ed). Lippincott Williams and Wilkins.
- www.abouthf.org
- www.americanheart.org
- www.smokefree.gov



Expecting Success: Excellence in Cardiac Care is a national program sponsored by the Robert Wood Johnson Foundation aimed at improving cardiac care for racial and ethnic minority populations in the United States. using a collaborative of Learning Network hospitals, the program develops and disseminates quality improvement strategies, models and resources to improve cardiac care for underserved minority populations in a variety of clinical settings. for more information: www.expectingsuccess.org

this guide was developed by a Special Work Group of *Expecting Success* leaders. members of the Work Group include:

Tammi Bornstein, BSN, RN, JD
Cardiac Care Coordinator
*Mount Sinai Hospital Medical Center
Chicago, IL*

Brennett Brown, RN, BSN
Heart Failure Nurse Coordinator
*University of Mississippi Medical Center
Jackson, MS*

Diana Goodell, BS, RN, BSN, CEN
Director/Nurse Manager Telemetry
*Delta Regional Medical Center
Greenville, MS*

Micaela Gutierrez, RN, MBA, CCRN
Heart Failure Nurse Specialist
*Del Sol Medical Center
El Paso, TX*

Jincy John, PharmD
Clinical Pharmacist Specialist
*Sinai-Grace Hospital
Detroit, MI*

Alina Matutes-Eckhardt, MSN, APRN, BC
Faculty Associate, Department of Medicine, Division of Cardiology
*University Health System
San Antonio, TX*

Elizabeth McDowell, RN, MSN, CCRN
Nurse Specialist, Cardiology
*Sinai-Grace Hospital
Detroit, MI*

Amy Pont, RN, BSN
Director of Health and Clinical Services
*Memorial Healthcare System
Hollywood, FL*

Felicia Stubbs, RN, BSN, MBA, CCRN
Director of MICU/CCU/Telemetry
*Mount Sinai Hospital Medical Center
Chicago, IL*

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF PUBLIC HEALTH
AND HEALTH SERVICES



Robert Wood Johnson Foundation

Technical Support: Marie DiPasquale, PhD, RN, Content Consultant; Vickie Sears, RN, MS, CCRN, *The George Washington University*; Dan Banks, Creative Director, *Project Design Company*; and Jim Nuttle, Illustrator, *Jim Nuttle, Inc.*