CCP CERTIFIED HEALTH COACH®

Chronic Care Professional (CCP) Health Coaching Certification Manual

An Interdisciplinary Curriculum for Population Health Improvement, Chronic Disease Management and Health Behavior Change Support

5th Edition

HSi HEALTHSCIENCES INSTITUTE

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PREFACE

PREFACE

Today we face lifestyle-related risks to global health, which cannot be vaccinated against, and chronic diseases, which cannot be cured. These threats to public health are unprecedented in scope and impact, affecting developed and developing countries alike. In the U.S., chronic conditions pose the biggest threats to health and independence—from children affected by diseases like diabetes rarely before seen in the young, to frail elderly who simply want to remain in their homes. Chronic conditions also threaten economic security, driving over 75% of total health care spending. Unsustainable health care spending is in essence a chronic care problem given that most health care delivered is delivered to patients with chronic conditions.

Stemming the human and financial costs of chronic conditions will require new health care delivery models, information technologies and biomedical advances—but must also include practitioners prepared and proficient in newer lifestyle management support and chronic care approaches that are significantly different from existing acute care-oriented approaches. While we continue to see serious gaps in the routine delivery of recommended medical care, we remain reliant on patients who will ultimately choose how they manage their health and health behaviors. The Chronic Care Professional (CCP) program was introduced in 2003 to prepare the interdisciplinary health care team in a new two-pronged model of evidence-based medical care and evidence-based patient support.

Implementing the Vision of the Institute of Medicine for Health Professions Education

HealthSciences Institute recognizes the CCP groundwork laid by members of the National Academy of Sciences, Institute of Medicine (IOM) *Health Professions Education: A Bridge to Quality* committee. This group, which represented U.S. employer purchasers, health systems and scores of professional associations—from nursing, medicine and pharmacy—called for a shift away from today's specialty accreditation, certification and licensure frameworks, to more cross-cutting, interdisciplinary, patient-centered credentials, along with a transformation in health care professional training and continuing education. It also called for a "retooling" of the health care workforce. The IOM report was an impetus for CCP, as was the World Health Organization's (WHO's) report: *Preparing a Health Care Workforce for the 21st Century: the Challenge of Chronic Conditions*.

Preparing for the New Health Care Environment

Health care organizations and professionals are faced with a new environment much like others in fields as diverse as transportation, telecommunications, and financial services, as well as primary and secondary education. Experts in organization change have observed that organizations go through predictable patterns in dealing with change. Those that survive these transitions understand the urgency for change and respond decisively by implementing new strategies, processes and technologies. Most importantly, they change their cultures and engage and prepare their people for success in the new environment. In the U.S. we have seen these same success factors in play (or not) in outcome studies of teams and organizations who have implemented new models ranging from the Patient-Centered Medical Home, Chronic Care Model or the Accountable Care Organization. Health care quality and value expert Stephen Shortell, MD, MPH, MBA, Dean of Public Health with UC Berkeley, has led a number of these studies. In his words, "We won't get better health care value without greater integration of evidence-based medicine and evidence-based management."

The Population Health Improvement Learning Collaborative

In 2010, HealthSciences Institute and the PartnersInImprovement Alliance founded the first not-for-profit health coaching and chronic care learning collaborative http://partnersinimprovement.org/. Now the largest interdisciplinary community of it's type, the collaborative provides free, noncommercial monthly webinars to over 10,000 practitioners in the U.S. and abroad. Each is facilitated by thought leaders and clinicians from institutions including Harvard, Mayo Clinic and Cleveland Clinic.

The Registered Health Coach & Health Coach Registry

For individuals who have completed the entire CCP program and examination (www.healthsciences.org/Chronic-Care-Professional-Certification), an advanced health coaching credential is available based on national standards for training and proficiency in motivational interviewing health coaching (Registered Health Coach or RHC). CCPs and RHCs are included in the first national health coach registry (www.HealthCoachRegistry.org).

Thanks to our Partners In Improvement

We recognize the population health industry association Care Continuum Alliance, and the Case Management Society of America, who have supported CCP certification, as well as over 5,000 professionals and hundreds of organizations that have shown their commitment to better patient care and purchaser value by choosing CCP. Thanks to over 25 BCBS affiliates, the U.S. Air Force, Kaiser Permanente, among others, who have provided CCP training and recommended or required CCP certification for staff. Special thanks to BCBS of Michigan who partnered with HealthSciences in a comprehensive workforce development project combining CCP, Motivational Interviewing (MI) skill-building and nurse proficiency assessment. The program was nominated for the BCBS Association Best of Blue Award, following an evaluation by health care services researcher, Dr. Ariel Linden. The study was the first to demonstrate a link between nurse proficiency in MI and member engagement (enrollment).

We are grateful for early support from the State of Minnesota Department of Human Services and PrimeWest Health, as well as the states of Wisconsin and Vermont. We also thank states, including Montana, who have made CCP a requirement for Medicaid disease management providers, along with consortiums such as Michigan's Medical Advantage Group, who chose CCP for practices in one of the top ten Patient-Centered Medical Home groups in the U.S. through a HealthSciences partial CCP tuition waiver program.

HealthSciences Institute also acknowledges our international participants and implementation partners from Canada, Asia, the Middle East, South America and Europe, with special thanks to the Alberta Health Authority for earlier funding for regional delivery of CCP throughout the province.

We are grateful for the hard work of the HealthSciences Institute team who contributed to the research, development, writing and design of this manual. We also thank the thought leaders and subject-matter-experts who shared their knowledge and expertise as faculty for the not-for-profit PartnersInImprovement Alliance and contributed to the online CCP program.

We hope that CCP helps you to support the success, health and independence of the people that you serve.

HealthSciences Institute

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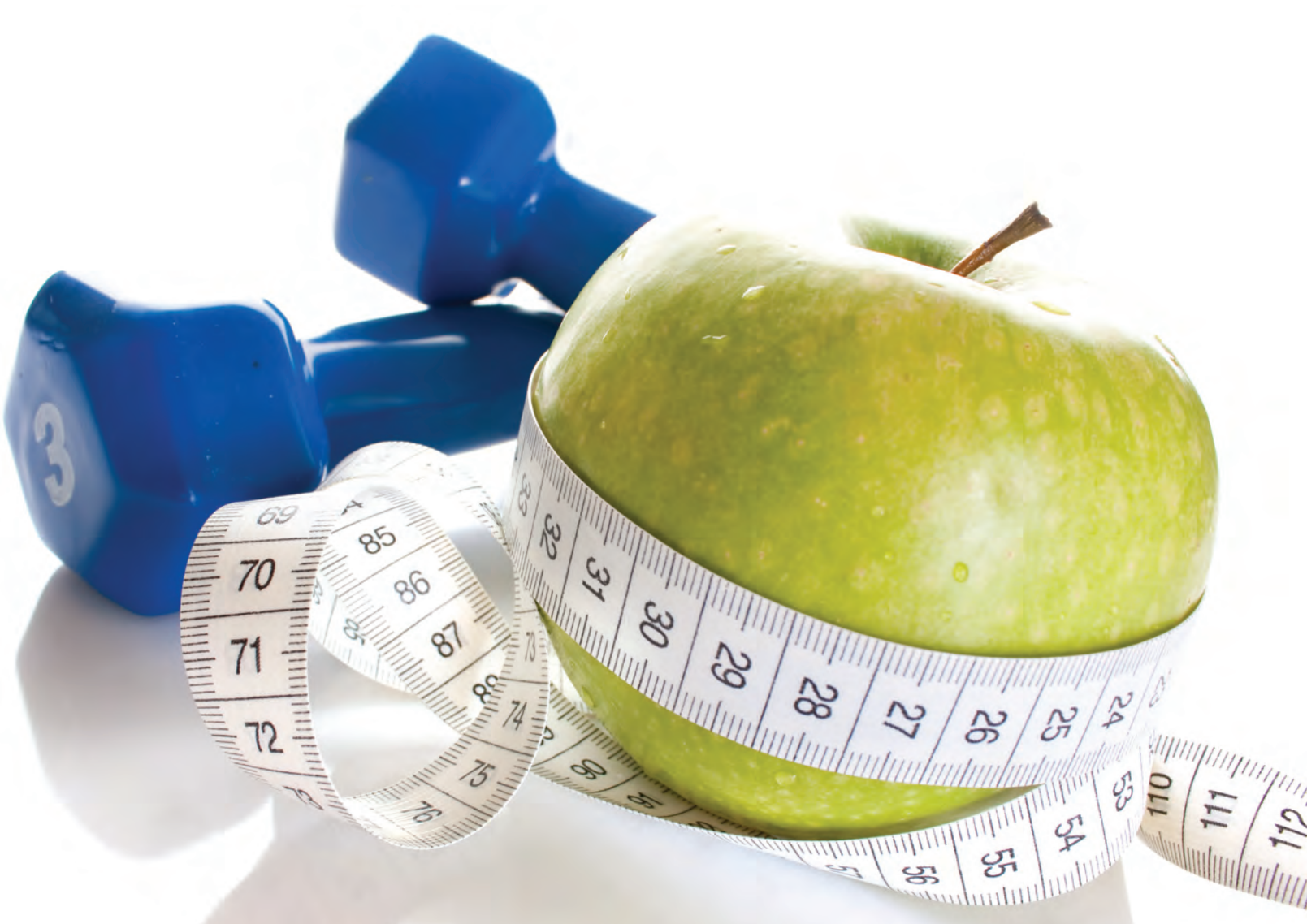

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CHRONIC CARE IMPROVEMENT CASE STUDIES

The following case studies and examples portray how chronic care improvement is being implemented across the care continuum.

CASE STUDY 1 | Primary Care Approaches for Improving Chronic Care

The Patient-Centered Medical Home

The **Patient-Centered Medical Home (PCMH)** is a popular comprehensive primary care model for children and adults that incorporates elements of the Chronic Care Model. PCMH principles[37] include:

- An ongoing relationship with a personal physician and team who are trained in continuous and comprehensive care and who are accountable for patient care.
- An orientation to whole-person care in which a personal physician provides or arranges care across all stages of life (i.e., preventive, acute, chronic and end-of-life care).
- Coordinated care across all settings (e.g., hospital, home, nursing home) via patient registries or other information tools and technologies.
- Quality and safety monitored by patient-centered outcomes, evidence-based medicine, quality improvement, and recognition as a PCMH.
- Enhanced access via open scheduling, expanded hours, email communications.
- Payment that reflects the range of patient support and coordination services, opportunities to share in purchaser or health savings or receive quality incentives.

Primary Care Practice Redesign

The planned care visit is one concrete example of how usual patient care processes and team roles can be modified to improve chronic care in primary care settings. Planned care visits are proactive and strategic and, unlike the usual office visit, everyone from the medical assistant to the physician has a clear role in the planned care visit process. In an actual planned care visit, the nurse care manager typically facilitates the visit from start to finish using protocols, standing orders, and physician oversight. The visit is organized around the care of the patient—not the routines, needs, or convenience of the practice staff. While practitioners are often first skeptical about planned care visits, once implemented, they typically prefer planned care visits to usual care.[38]

LEARN MORE

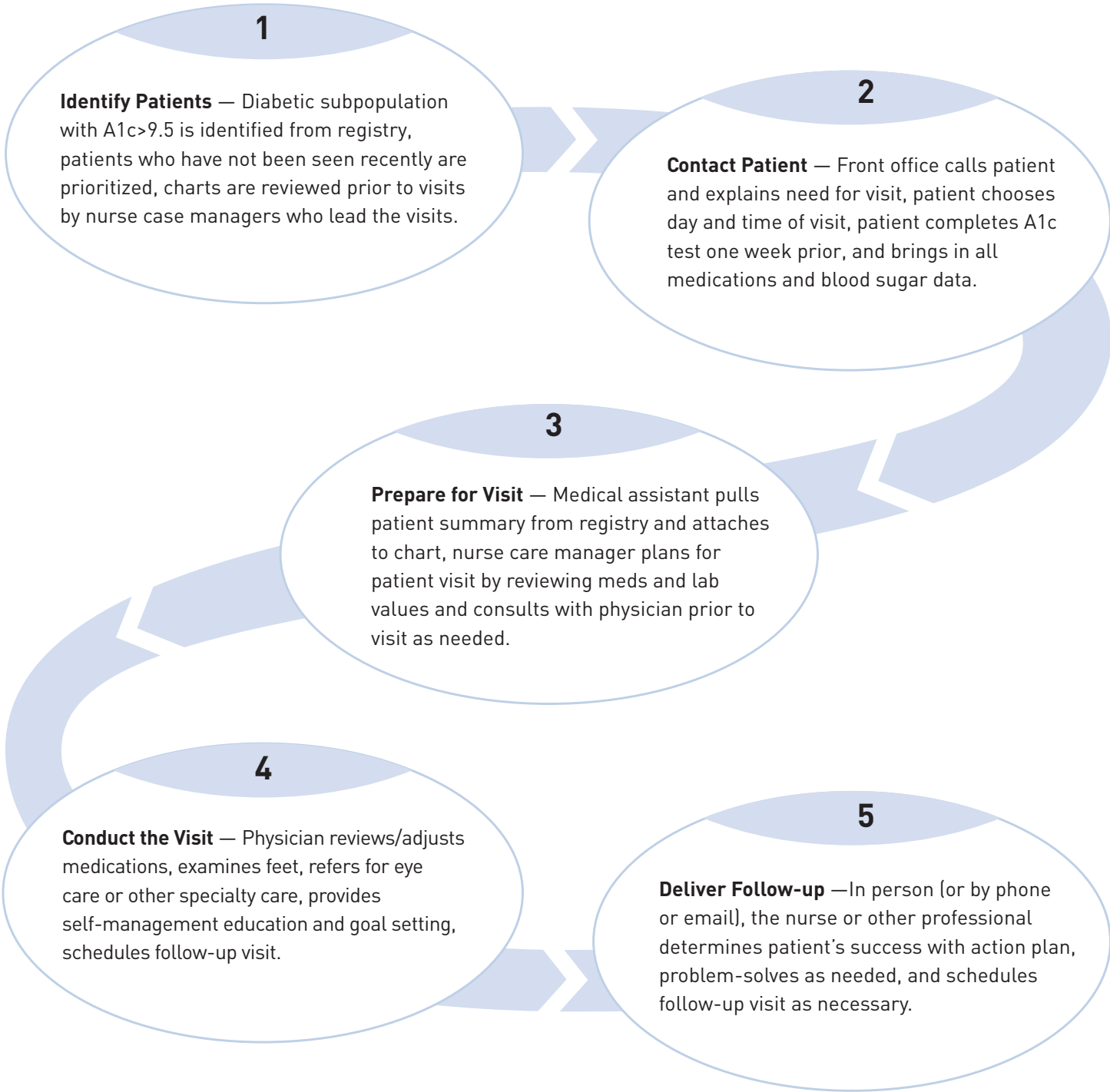
about the PCMH at:

http://www.pcpcc.net/

https://www.urac.org/

http://www.ncqa.org/

Figure 7. Planned Care Visits for Primary Care Redesign



Guidelines for Improving Care Transitions

Six physician professional societies, including the American College of Physicians, have developed the following standards for improving care transitions:[48]

- Foster true patient engagement, make caregivers care team members
- Measure performance based on value for patients and caregivers
- Provide a medical home or coordinating clinician for all patients; make it clear to patients and caregivers who is responsible for care, at any given point
- Make sending and receiving professionals and care transitions teams accountable during care transitions or handoffs
- Build team competencies in chronic care coordination as well as true patient-centered care communications and self-care support
- Implement standards for health information exchange
- Use standardized metrics to improve accountability and performance
- Align financial incentives to promote cross-setting collaboration

The National Quality Forum (NQF) has also developed measurement frameworks for assessing the quality of acute care transitions. Figure 17 illustrates the NQF-endorsed measurement framework for assessing efficiency and value associated with care over the course of an episode of illness and sets forth a vision to guide ongoing and future efforts.[49]

National Quality Forum: Evaluating Efficiency Across Acute Care Episodes

Figure 17. National Quality Forum: Evaluating Efficiency Across Acute Care Episodes

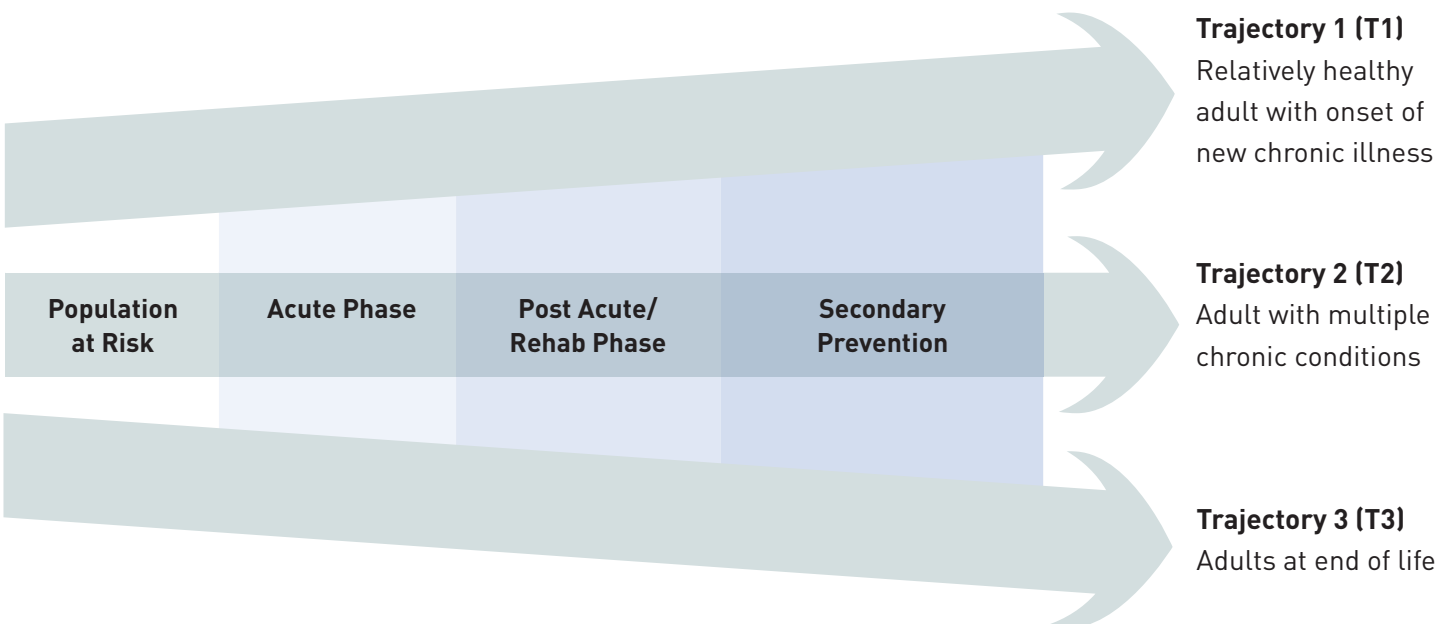


Figure 5. WISE Model of Chronic Conditions

Warning Signs

- What trouble signs do I watch for?
- What do I do if I get worse?
- Who can help me watch for trouble signs and get help if I need it?

Impact

- Why do I have this condition?
- What is the best and worst that I can expect?
- How will this condition affect my daily life now and in the future?

Self-Care Steps

- Which medications do I take and how do I take them?
- Which activities and foods are best for me?
- Who can support me in my daily self-care?

Evidence-Based Care

- Which tests do I need and how often do I need them?
- Which treatments and medications should I ask my doctor about?
- What are the risks of these treatments and medications?

Heart Failure (HF)

Following damage to the heart, often from severe or multiple heart attacks, the heart loses its ability to pump effectively. As the heart gradually loses pumping capacity, it tries to adjust by enlarging and thickening (remodeling) and pumping faster. This syndrome, known as heart failure (HF), is the final stage of coronary artery disease. Only 35% of patients survive five years after HF diagnosis.

Nearly six million people currently have HF, making it the fastest growing heart condition in the U.S.—affecting about 2% of the population 65 years of age and older.[27]

Heart Failure: Causes

HF can be caused by coronary artery disease, heart attacks, congenital heart problems, high blood pressure, heart valve problems, or long-term alcohol or drug abuse.

Heart Failure (HF)

A syndrome characterized by the heart's inability to properly pump blood or fill with blood, **heart failure** usually follows multiple or severe heart attacks and was formerly referred to as CHF.

Heart Failure: Costs

Approximately 30-40% of patients with HF are hospitalized every year. As the risk of developing HF increases with age, HF is the most frequent cause of hospitalization and rehospitalization among older Americans. In the U.S., HF is the leading Medicare diagnosis-related group (DRG) among hospitalized patients older than 65 years, and more Medicare dollars are spent for the diagnosis and treatment of HF than for any other diagnosis. In the U.S. alone, it is associated with $39 billion in costs per year.[28]

Heart Failure: Warning Signs

HF warning signs (Figure 9) vary depending on the severity and area of the heart affected; symptoms may not appear for years. However, dyspnea (shortness of breath) or fatigue, exercise intolerance, irregular heartbeat, and leg or abdominal swelling (known as edema) can signal the onset of HF or HF-related complications. Regardless, if these symptoms appear, patients are advised to seek prompt medical attention.

Figure 9. Heart Failure Warning Signs

Heart Failure Warning Signs	
Fatigue and Weakness	Result from a loss of blood flow to the body's major organs
Rapid, Irregular Heartbeat	As the heart beats faster to pump enough blood to the body, a fast or irregular heartbeat can result.
Shortness of Breath	Can occur during exertion and when fluid backs up in the lungs
Wheezing or Cough	Can present with white or pink blood-tinged mucus
Pronounced Neck Veins	Due to a backup of blood
Swelling (Edema)	Less blood circulating through the kidneys can cause fluid and water retention in the abdomen, legs, ankles or feet.
Sudden weight gain of 2-3 pounds (kilogram or more)	Can result from fluid retention in the body
If any of these signs or symptoms suddenly become worse or a new sign or symptom appears, it may mean that existing heart failure is getting worse or not responding to treatment. Immediate medical attention is required.	

Heart Failure: Impacts

HF is associated with very high risk of disability and death. Although HF patients are frequently hospitalized for HF-related complications, many hospitalizations can be avoided when patients receive the appropriate evidence-based treatments and effectively manage their disease.

- **HF Complications.** HF patients are at high risk for a number of HF-related complications, including organ damage, pulmonary edema, liver enlargement, liver failure, sudden cardiac arrest (SCA), and death.
- **Hospitalization.** Failure to respond promptly to HF complication warning signs, or poor adherence to medications or lifestyle recommendations cause most avoidable hospitalizations.
- **Permanent Disability.** HF is usually a chronic, long-term condition. Its prognosis depends on factors including age and the severity of the disease.
- **Death.** On average, an HF patient lives four years following diagnosis. Death rate can be reduced significantly through the use of evidence-based drugs (e.g., ACE inhibitors and beta-blockers) and implantable devices (e.g., cardiac defibrillators).[29]

Figure 10. New York Heart Association Classifications

New York Heart Association Classifications	
Class I:	Patients experience no limitations; ordinary physical activity does not cause undue fatigue, dyspnea, or palpitations.
Class II:	Patients experience slight limitation of physical activity; patients are comfortable at rest; ordinary physical activity results in fatigue, palpitations, dyspnea or angina.
Class III:	Patients experience marked limitation of physical activity. Although patients are comfortable at rest, less than ordinary activity leads to fatigue, dyspnea, palpitations or angina.
Class IV:	Symptoms of HF are present at rest; discomfort increases with any physical activity.

Heart Failure: Self-Care Steps

Most of the self-care steps for CAD apply to HF. However, physical activity recommendations need to be customized more for HF patients (Figure 11). For all HF patients, daily weighing is a critical step. By identifying fluid retention early, serious complications and hospitalizations can be averted.

Figure 11. HF Self-Care Steps

HF Self-Care Steps	
Follow CAD Self-Care Recommendations	Most HF patients can benefit from general CAD self-care recommendations for diet, weight management, stress management, and coping. Patients with HF should obtain a physical activity prescription that specifies the activity type, intensity, and duration according to their HF severity level and functional status.
Monitor Weight Daily	Weight monitoring helps quickly identify fluid retention. Patients should weigh themselves upon rising, after they have urinated, but before eating breakfast. They should also notify their physician immediately if they experience a daily weight gain of more than 2-3 pounds.
Manage Sodium Intake	Sodium intake should be limited to 2,000 milligrams per day. Patients should be particularly careful of hidden sodium in many packaged and prepared foods.
Manage Fluid Intake	Some physicians may also recommend restrictions of daily fluid intake.
Manage Alcohol Intake	Avoid alcohol or consume no more than two to three alcoholic drinks per week.
Adjust Sleeping Position	Sleep with head propped at a 45 degree angle if experiencing shortness of breath.

Heart Failure: Evidence-Based Care Recommendations

Many patients with HF are at high risk of sudden cardiac death. Therefore HF therapy (which includes medications, medical devices, and behavioral coaching) is matched to the patient's HF stage, functional level, and clinical status (Figure 12).[30, 31] Compassionate or palliative care is a key focus of care at the end stage of HF.

Figure 12. Evidence-Based Care in Heart Failure

Evidence-Based Care in Heart Failure	
Initial And Ongoing Assessment	
Identify structural and functional abnormalities by using an echocardiogram, coupled with Doppler flow studies, to yield a left ventricle ejection fraction (LVEF) estimate. This assessment also yields laboratory testing, evaluation of HF cause and possibility of CAD. At this stage, the patient should have a documented New York Heart Association (NYHA) functional classification made. In addition, periodic reevaluation should be conducted, including LVEF measurements and NYHA reclassification.	
Medications	
Depending on HF stage and clinical features, medication options include: ∘ Angiotensin-Converting Enzyme (ACE) Inhibitors ∘ Angiotensin II Receptor blockers (ARBs) ∘ Beta-Blockers ∘ Diuretics	∘ Digitalis (Digoxin) ∘ Hydralazine/Nitrates ∘ Aldosterone Antagonists
Medical Devices	
Implantable Cardioverter Defibrillator (ICD)	When LVEF <30% and NYHA functional class of II or III
Cardiac Resynchronization Therapy (CRT)	When LVEF <35%, with NYHA functional class III or IV, optimal medical therapy, and cardiac dyssynchrony
Behavioral Coaching	
Smoking Cessation Support	Assess smoking status and provide support for smoking cessation according to patient preference.
Physical Activity	Most HF patients can benefit from an activity program such as walking to maintain cardiac function and to prevent deterioration.
Discourage Alcohol and Illicit Drug Use	No more than 2-3 drinks per week.
Sodium restriction	Sodium should be reduced to <2,000 mg per day.
End-Stage Care	
∘ Compassionate hospice/end of life care in the final stages of HF. ∘ Consider extraordinary measures, including transplant.	

Figure 13. Common Cardiovascular Medications Used for CAD and HF

Common Cardiovascular Medications Used for CAD and HF	
Class	**Description and Examples**
Antiplatelets	Prevent blood clots in coronary arteries; include aspirin and clopidogrel.
Beta-Blockers	Slow heart rate; lower blood pressure and reduce angina; include atenolol, bisoprolol, carvedilol, timolol, propranolol, and metoprolol.
Statins	Lower cholesterol; include simvastatin, pravastatin, and atorvastatin.
Nitrates	Relieve chest pain and other symptoms of angina; include nitroglycerin, and isosorbide dinitrate.
Calcium Channel Blockers	Slow heart rate; lower blood pressure and dilate the coronary arteries (which can reduce angina); include verapamil, diltiazem, amlodipine, bepridil, felodipine, and nifedipine.
Diuretics	Keep fluid from collecting in the body; include amiloride, bumetanide, furosemide, chlorothiazide, chlorthalidone, hydrochlorothiazide, indapamide, and spironolactone.
ACE Inhibitors	Lower blood pressure and reduce heart strain; include captopril, enalapril, fosinopril, lisinopril, perindopril, quinapril, ramipril, and trandolapril.
Aldosterone Antagonists	Primarily used in the treatment of HF; include spironolactone and eplerenone.
Angiotensin II Receptor Blockers (ARBs)	Often used if the patient cannot tolerate an ACE inhibitor; include candesartan, losartan, and valsartan.
Anticoagulants	Prevents blood clots; includes warfarin.
Digoxin	Also referred to as digitalis; reduces HF symptoms.

METABOLIC SYNDROME

Metabolic syndrome refers to a group of risk factors that occur together to increase the risk for CAD, stroke, and type 2 diabetes. These factors include irregular blood sugar levels (dysglycemia), high blood pressure, elevated triglyceride levels, low high-density lipoprotein cholesterol levels, and obesity (particularly abdominal). People with metabolic syndrome often exhibit excess blood clotting and low grade inflammation throughout the body—which can make the condition worse and is linked with a number of chronic conditions from heart disease to cancer, as previously cited.

Almost one in four American adults has metabolic syndrome (50-75 million people).

Metabolic Syndrome

Metabolic syndrome is characterized by being overweight, unhealthy cholesterol levels, high blood pressure, and high blood glucose level (also referred to as pre-diabetes).

Metabolic Syndrome Criteria

Three of the following five factors must be present to be diagnosed with the condition:

- Abdominal obesity (waist circumference >40" in men or >35" in women)
- Triglyceride level of >150 mg/dL (1.69 mmol/L)
- HDL <40 mg/dL (1.03 mmol/L) in men or <50 mg/dL (1.29 mmol/L) in women
- BP >130/85 (or taking antihypertensive meds)
- Fasting blood glucose >110 mg/dL (6.1 mmol/L)

Metabolic Syndrome: Risk Factors and Impacts

A variety of lifestyle and genetic factors contribute to metabolic syndrome. Metabolic syndrome increases the risk of coronary heart disease two times and risk of type 2 diabetes five times at any given LDL level.

Risk factors include:

- Insulin resistance
- Obesity
- Advancing age
- Hormonal changes
- Lack of physical activity
- Diet

Module 2 | AGE-RELATED CONDITIONS

Chronic conditions are the biggest risk to the health and independence of seniors. Seniors are also at higher risk of disease-related complications and disability due to the loss of physical reserves, or reduced physical resilience, associated with advanced age. Seniors are also at higher risk of adverse reactions due to multiple medications (polypharmacy). And while hospitalization and post-acute care in a skilled nursing facility prior to return to home may be unavoidable, even a few days of bed rest may result in loss of aerobic ability, strength, or cognitive capacity, or incontinence for a senior. Often medical treatments, self-care steps, and lifestyle recommendations must be modified for seniors who may be coping with hearing or vision impairment, memory disorders, or limited mobility.

FRAILTY

Frailty is not a disease, but a geriatric syndrome marked by loss of function and physical reserves. Though an estimated 7% of older adults (>80 years) can be described as frail, there is no standardized definition of the syndrome and it is not easily diagnosed. Most geriatric care experts agree on these key signs of frailty: inflammation, loss of muscle mass (sarcopenia), decline in the functioning of the nervous system and hormones (neural disregulation), and loss of bone density.[79] For frail older adults, the comprehensive geriatric assessment or evaluation, combined with interdisciplinary treatment planning, is critical for assessing causes and identifying management strategies.

Frailty

Frailty is a late life syndrome that is caused by chronic illness(es) and, or, age-related loss of physical reserves, and is frequently poorly recognized, assessed, and managed.

Frailty: Impacts

Frailty is associated with a progressive decline in multiple body systems. It is marked by losses of function and physiologic reserves, as well as an increased vulnerability to disease and death. Frailty increases the risks of acute illness, falls, and institutionalization. Frail older adults are less able to tolerate the stress of illness, hospitalization, and immobility.

Frailty: Warning Signs

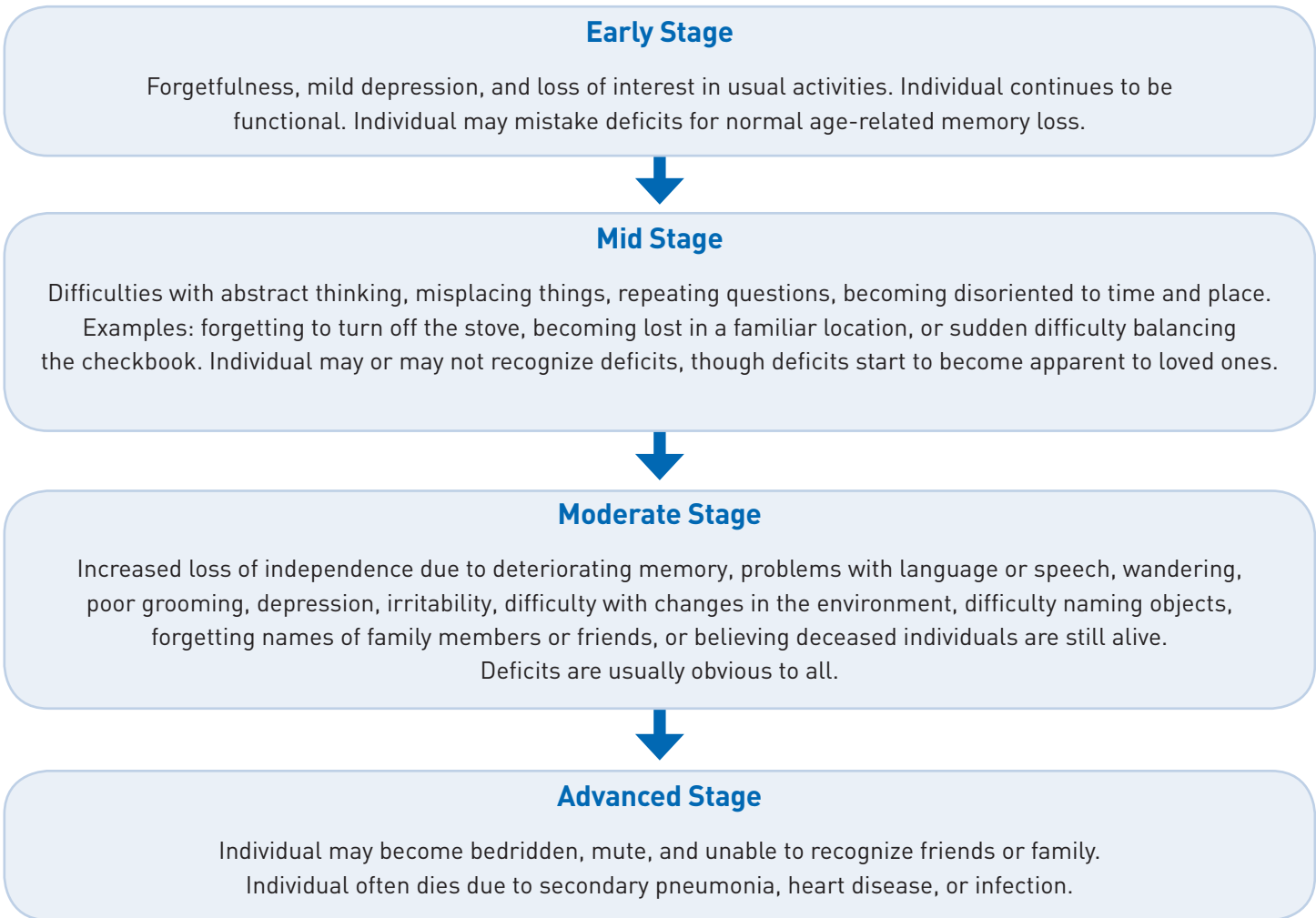
Frailty warning signs are frequently accepted as normal.

- Unintentional weight loss of more than ten pounds
- General feelings of exhaustion, weakness (reduced grip strength)
- Slow walking speed, and low levels of activity

The Course of Alzheimer's Disease

While the progression of AD can vary significantly, patients with this disease often progress through some common stages (Figure 67).

Figure 67. The Course of AD



Managing Dementia-Related Behavioral Disturbances

Most health care providers and family members are uncomfortable addressing the topic of dementia. However, it is important to engage the patient in a discussion about his or her disease and end of life care decisions while cognitive functioning is still relatively intact. Address the topic of advance directives early. And keep in mind that environmental and behavioral support strategies can help prevent behavioral problems and improve quality of life during the later stages of the disease.[94]

Dementia-related behavioral problems are common among dementia patients. These problems often precipitate caregiver burnout, nursing home placement, and cause unnecessary distress for patients. Fortunately, there are some helpful strategies for managing common dementia-related behavioral problems (Figure 68).

Figure 68. Tips for Managing Dementia-Related Behaviors and Communicating with Patients Affected by Dementia

Managing Dementia-Related Behaviors	Communicating with Patients Affected by Dementia
○ Frankly discuss the diagnosis when confirmed. Address health and financial decision-making, such as designation of a durable power of attorney and advance directives, while decision-making is still intact. ○ Establish a daily routine, as well as a stable and safe environment. ○ Maintain proper diet and fluid intake. Memory impairment increases the likelihood of malnutrition and dehydration. ○ Encourage exercise to reduce agitation, promote sleep, and improve mood. ○ Post reminders around the home to prompt behavior (e.g., "turn off stove," "comb hair," "do not go outside") and make daily to-do lists. ○ Promote socialization and prompt the individual to continue pleasurable activities. ○ Provide coaching for personal hygiene, dental care, and management of other chronic conditions. Assist with daily medications. ○ Break complex directions or procedures into very small steps.	○ Avoid surprising or startling patients. First, identify yourself. Eliminate visual or auditory distractions for the patient when you are communicating. ○ Take time, listen, and be patient. Avoid shouting, slow down your speech a bit, and raise your tone if necessary. ○ Maintain good eye contact. ○ Nonverbal communications are often more readily understood by people with dementia. Use touching and hugging to connect. ○ Fear is the common denominator in many dementia-related problem behaviors. Stay calm, lower your voice, and reassure. ○ Don't take things too seriously or personally. Find humor. ○ Remember that there is a person behind the dementia who has many of the same needs and feelings as you do, even if they can't express them. ○ Keep the focus on the present. Whatever pleasure you can bring to the individual in the moment can help, don't worry that they may soon forget.

LEARN MORE

Alzheimer's Association:
http://www.alz.org/

Alzheimer's Foundation of America:
http://alzfdn.org/

National Institute of Neurological Disorders and Stroke:
http://www.ninds.nih.gov/

PLANT-BASED FOODS

Fruits and vegetables, nuts, natural vegetable oils, and whole grains are all considered **Plant-based Foods**. Diets rich in plant-based foods, such as Mediterranean and Asian diets, are associated with low rates of cardiovascular disease, type 2 diabetes, hypertension, obesity, and mortality.[2]

Fruits and Vegetables

Diets rich in fruit and vegetables reduce the risk of chronic diseases such as coronary artery disease and certain types of cancer. In addition, they aid greatly in weight management. Unfortunately, only 26% of Americans report consuming the minimum recommended 3-a-day servings of vegetables and only 32% report eating the recommended 2-a-day servings of fruit.[3]

How are eating plant-based foods and health conditions related? Besides being low in calories, and high in nutrients, vitamins, minerals, and fiber, recent research studies have identified specific properties of fruits and vegetables that work together to enhance health. For example, as we are exposed to toxins in the environment, such as pollutants in the air, the body's cells naturally deteriorate, or oxidate, by losing electrons. The resulting free radicals play a role in many diseases. Naturally occurring **Antioxidants**, some known—such as Vitamins A, C, E, zinc, beta-carotene, and selenium—and many more yet to be identified, are abundant in fruits and vegetables.

Practice Tips

Packed with an abundance of nutrients and minerals, "super foods" provide the biggest bang for your fruit and vegetable buck. Try any of these nutrient rich foods:

- Blueberries
- Broccoli
- Oranges
- Pumpkin
- Tomato
- Kale
- Spinach
- Beans

Phytochemicals or phytonutrients are plant substances that promote health or reduce disease risk. Phytochemicals give plants their color. Many phytochemicals have strong anti-oxidant properties, others can mimic hormones, e.g., soybeans. There are thousands of different kinds of phytochemicals, such as polyphenols, phytoestrogens, and flavonoids that each has natural, health-promoting effects. For example, phytochemicals have anti-inflammatory, antibacterial, antiviral, antiallergic, or anticarcinogenic properties. Interestingly, many prescription drugs in the United States originated as plant products, as scientists realized the benefits of phytochemicals. Since vitamin supplements include a small fraction of the 25,000 estimated phytochemicals in plant-based foods, and since many of these chemicals work in concert, consuming a variety of foods high in phytochemicals is preferable to taking supplements.

Diets high in fruits and vegetables reduce heart disease risk and mortality. Compared to individuals who ate less than 1.5 servings of fruits and vegetables a day, people who ate five or more servings were 28% less likely to have cardiovascular disease in one study.[4] Researchers speculate that the high fiber content, combined with the antioxidants and other bioactive components found in fruits and vegetables, reduces the incidence of cardiovascular disease. Vegetables rich in carotenoids (e.g., broccoli, carrots, spinach, lettuce, yellow squash, tomatoes) protect against cardiovascular disease, while vitamin C-rich fruit and vegetables protect against stroke.[2]

Regular consumption of a variety of fruits and vegetables has also been linked to a decreased incidence of certain cancers including lung, breast, prostate, ovarian, colon, esophageal and non-Hodgkin's lymphoma. In particular, cruciferous vegetables, such as broccoli, cabbage, brussels sprouts, and cauliflower are associated with a decreased incidence of cancer.[5]

Researchers speculate that the antioxidant properties of many vegetables and fruits are responsible for their anticarcinogen effect because they combat the free radical cells that would have been more likely to mutate into cancerous cells. Frequent consumption of fruits and vegetables has also been associated with decreased incidence of type 2 diabetes, asthma, chronic obstructive pulmonary disease (COPD), osteoporosis and bone fractures, neurodegenerative diseases, and the cognitive decline associated with aging.[6]

Fruits and vegetables also play an important role in weight management. This is because fruits and vegetables are low calorie **Volumizers**. Volumizers are foods that are high in volume, fiber, and water content, which slow digestion, and produce a longer sensation of fullness. Thus, individuals who eat a diet rich in fruits and vegetables are frequently less likely to feel hungry and snack on foods dense in calories.

How many servings of fruits and vegetables should one eat, and what constitutes a serving? Experts recommend 5 or more servings of fruits and vegetables per day for immune system support and disease prevention. However, this is the minimum. Higher total fruit and vegetable consumption is associated with increased protective health benefits. Thus, ideally, everyone should strive to eat 7-10 servings a day.[7] See Figure 1 for serving size recommendations.

EATING AND CULTURE

Eating is heavily influenced by background and culture. Eating brings people together and is often central in celebrating life's milestones. The good news is that no matter what culture or eating philosophy patients are from, they can still adhere to healthy eating guidelines. Oldways, the organization that developed the popular Mediterranean diet pyramid in 1993 provides culturally specific pyramids, e.g., Latino, Asian, and African diet pyramids and preference-specific pyramids, e.g., the vegetarian diet pyramid.

VEGETARIANISM

While **Vegetarianism** seems unnatural to many Westerners, half the world population does not eat meat or dairy products due to economic factors, ethical, or religious beliefs. And vegetarianism is gaining popularity in developed countries, including the U.S. Mainstream media outlets such as *Cooking Light* and National Public Radio have encouraged "meatless Mondays" as a way to promote awareness of the overconsumption of animal protein and its ecological impact. Vegetarianism is gaining momentum with more public figures, e.g., former President Bill Clinton, proclaiming the health benefits.

The term vegetarian is often misunderstood. When someone identifies him or herself as a vegetarian, this generally means that they abstain from eating animal protein (e.g., beef, poultry). However there is a range of vegetarianism: Vegans abstain from all animal products (e.g., eggs, dairy, leather products), while pescatarians include seafood in their diet. There are many vegetarian options that lie between.

Despite its popularity, common misconceptions and concerns about vegetarianism persist—the most common being that a vegetarian diet is incomplete. However, this myth has been debunked. For example the American Dietetic Association and Dietitians of Canada have concluded, that at all stages of life, a properly planned vegetarian diet is "healthful, nutritiously adequate, and provides health benefits in the prevention of and treatment of certain diseases."[20] As discussed earlier, all necessary proteins, amino acids, and nutrients may be found in a combination of nuts, grains, legumes, fruits, and vegetables. Further, vegetarian diets tend to be lower in saturated fat and cholesterol, and higher in complex carbohydrates, fiber, folate, potassium, and the antioxidants, vitamin C and E.[20, 21]

Compared to nonvegetarians, vegetarians tend to have lower body mass index (BMI), cholesterol, and blood pressure.[22, 23] Vegetarians also have reduced incidence of heart disease, hypertension, stroke, type 2 diabetes, and obesity compared to nonvegetarians.[23] However, vegans, in particular, must plan their diets carefully to ensure that they are consuming complete proteins and taking in appropriate amounts of certain vitamins and minerals. For example, vegans are more likely to develop vitamin B12 deficiency than vegetarians who include dairy and eggs in their diet.[24] Vitamin B12 is not found in plant-based food, but only in animal products. B12 deficiency is associated with anemia, fatigue, weakness, appetite loss, weight loss, loss of balance, depression, and dementia.[25] Vegetarians can easily avoid B12 deficiencies and meet their recommended daily intake of B12 by eating low fat dairy products, eggs, nutritional yeast, and B12 fortified cereals; vegans can simply take a B12 supplement.

You don't have to become completely vegetarian to reap some of these benefits. A new wave is called "flexitarianism," and refers to those who primarily eat a plant-based diet but also eat meat occasionally. In other words, they are part-time vegetarians. How can you, or your family members or patients, try a vegetarian diet? For starters, try meatless Mondays. Try adding beans to casseroles instead of meat or use tofu in a stir-fry instead of chicken. Or, plan a meal that is typically enjoyed meatless anyway: vegetarian lasagna, minestrone soup, or vegetable-stuffed bean burritos.

SIMPLE GUIDELINES FOR CONSCIOUS EATING

With all this information about healthy eating and guidelines about the most healthful food choices, it is easy to get overwhelmed. Michael Pollan's book *Food Rules*, offers 83 simple and catchy rules. Here are ten from his book:[26]

1. **Don't eat anything your great-grandmother wouldn't recognize as food.** This will help you steer clear of "foods" like fruit roll-ups and go-gurts—foods filled with corn syrup, additives, and chemicals.
2. **Shop the perimeter of the grocery stores; stay out of the middle.** Most grocery stores' perimeters contain fresh produce, dairy, meat products, and grains. The remaining food in the middle is typically packaged and processed, which you can make yourself from the ingredients you bought from the periphery.
3. **Don't eat breakfast cereals that change the color of your milk.** If it changes the color of your milk, it was made with color additives and most likely, added sugar.
4. **Love your spices.** Adding spices to your meals will enhance the flavor without the salt, fat, or sugar. Plus, many spices contain rich antioxidants that promote your health.
5. **Make water your beverage of choice.** Try bottling your own water instead of buying bottled water. Most "bottled water" is filled at the same tap source that services your home.
6. **If you're not hungry enough to eat an apple, you're probably not hungry.** This is a good thought experiment to rule out boredom, sadness, or other reasons besides hunger that drive people to eat.
7. **Serve your vegetables first.** If you serve them first, you're more likely to eat them. Further, you are likely to fill up faster on them, and leave less room for the richer or less healthy choices. Don't stop there—fill half your plate with vegetables!
8. **Don't get your fuel from the same place your car does.** A fun and quirky way to remind you that foods at gas stations are typically full of fat, sugar, carbohydrates, and additives. With the exception of milk and cheeses that are sometimes sold at gas stations, buy your snacks at the farmer's market or grocery store.
9. **Eat meals.** Americans eat most of their meals in the car, at their desk, or in front of the TV. When distracted with other tasks, you tend to not be in touch with your satiety signals and are likely to overeat. Next time it is breakfast, lunch, or dinner, take 20 minutes, sit down at a table (your desk does not count), and pay attention to your meal as you eat it. You will be fuller, faster when you consciously eat.
10. **Treat treats as treats.** Do not deny yourself the occasional sweet, but treat them as treats. To help you, only eat treats that you make yourself, from scratch. Given that it takes 45 minutes to bake your own brownies, and you're likely to not have that kind of time often, it will limit their availability and your tendency to "snack" on them at liberty.

LEARN MORE

Kessler, D. A. (2009). *The End of Overeating: Taking Control of the Insatiable American Appetite.* New York: Rodale.

Pollan, M. (2011). *Food Rules: An Eater's Manual.* New York: Penguin Press.

Pollan, M. (2008). *In Defense of Food: An Eater's Manifesto.* New York: Penguin Press.

METHODS FOR MEASURING OBESITY

There are several methods for assessing overweight and obesity. In this section, we review some of the most popular, and assess the pros and cons of each.

Skinfold Measurement

The **Skinfold Measurement** relies on calipers to measure skinfold thickness around various parts of an individual's body (e.g., triceps, shoulder blades, hips) to determine how much of an individual's mass is fat.

Body Mass Index

The **Body Mass Index (BMI)** was popularized in 1972 by Ancel Keys and gauges the relative proportion of an individual's height to weight. Currently, the BMI is the gold standard of measurement for overweight and obesity. Figure 11 is an adult BMI chart. Refer to Figure 12 to see the health risks associated with each BMI level.

Figure 11. Adult Body Mass Index Chart

Weight	lbs	100	105	110	115	120	125	130	135	140
	kgs	45.5	47.7	50.0	52.3	54.5	56.8	59.1	61.4	63.6
Height		Underweight				Healthy				
inches	cm									
5'0"	152.4	19	20	21	22	23	24	25	26	27
5'1"	154.9	18	19	20	21	22	23	24	25	26
5'2"	157.4	18	19	20	21	22	22	23	24	25
5'3"	160.0	17	18	19	20	21	22	23	24	24
5'4"	162.5	17	18	18	19	20	21	22	23	24
5'5"	165.1	16	17	18	19	20	20	21	22	23
5'6"	167.6	16	17	17	18	19	20	21	21	22
5'7"	170.1	15	16	17	18	18	19	20	21	22
5'8"	172.7	15	16	16	17	18	19	19	29	21
5'9"	175.2	14	15	16	17	17	18	19	29	29
5'10"	177.8	14	15	15	16	17	18	18	19	20
5'11"	180.3	14	14	15	16	16	17	18	18	19
6'0"	182.8	13	14	14	15	16	17	17	18	19
6'1"	185.4	13	13	14	15	15	16	17	17	18
6'2"	187.9	12	13	14	14	15	16	16	17	18
6'3"	190.5	12	13	13	14	15	15	16	16	17
6'4"	193.0	12	12	13	14	14	15	15	16	17

A BMI calculator for children and teens may be found at: http://apps.nccd.cdc.gov/dnpabmi/

Figure 14. Weight Loss Guidelines: NHLBI/NIH[54]

Component	Guideline
Assessment	∘ Practitioners should use BMI to assess weight. ∘ Weight alone can be used to monitor weight loss and determine therapy's efficacy.
Weight loss goals	∘ Initial weight loss therapy should reduce body weight by ~**10%**. After this, further weight loss may be attempted. ∘ Rate of weight loss should be 1-2 lbs. (.5-1 kg.) per week for a period of six months, with subsequent strategy based on the amount of weight lost.
Type of diet	∘ A low calorie diet (reducing dietary fat and carbohydrates) is recommended in overweight and obese patients. ∘ An individually planned deficit of 500-1,000 calories per day is recommended to achieve weight loss of 1-2 lbs. per week.
Physical activity	∘ Physical activity is key to weight loss. ∘ Initially, moderate levels of physical activity for 30-45 minutes, three-five days per week should be encouraged upon physician clearance. ∘ All adults should set long term goal of 30 minutes or more moderate intensity physical activity on most (preferably all) days of the week.
Weight loss maintenance	∘ After successful weight loss, a program that includes dietary therapy, physical activity, and behavior therapy, to be continued indefinitely, increases the likelihood of maintenance. ∘ Drug therapy may also be used, but not beyond one year of total treatment, as drug safety and efficacy has not been assessed beyond this time frame.
Special Populations	
Weight loss drugs	∘ For patients with a BMI > 30 and no concomitant obesity-related risk factors (or BMI > 27 with obesity-related risk factors), FDA-approved weight loss drugs may be used in conjunction with a comprehensive weight loss program. ∘ Weight loss drugs should never be used without concomitant lifestyle modification. ∘ Assessment of weight loss drug efficacy and safety should be continually monitored. If weight loss drug is effective in helping patient lose or maintain weight loss and there are no serious adverse effects, it may be continued. If not, it should be discontinued.
Weight loss surgery	∘ Weight loss surgery is an option for carefully selected patients with clinically severe obesity (BMI $\geq$ 40 or $\geq$ 35 with comorbid conditions) when less invasive methods of weight loss have failed and the patient is at high risk for obesity-associated morbidity or mortality.

Figure 18. Different Types of Identified Stress

Type	Description
Acute stress	When a momentarily threatening event occurs *Example:* Being in car accident
Chronic stress	Develops when a threatening event is continuously encountered *Example:* Regular, excessive work demands
Daily hassles	Small stressors that are encountered daily and have a cumulative impact *Example:* The car has a flat tire, family pet has an accident on the carpet
Major life events	Events, positive or negative, that cause disruption to the normal schedule *Example:* Getting married, moving to a new city, death of a close family member

We know now that stress can increase the risk of chronic conditions. However, we did not always see this connection. In 1967, researchers investigated the relationship between stress and the likelihood of becoming sick.[75] Scientists identified 43 potentially stressful events and rated them on a scale of one (least stressful) to 100 (most stressful), based upon the amount of life readjustment required. Not surprisingly, as patients encountered more events, their likelihood for illness increased. Figure 19 presents some of the 43 identified stressors. Take a look at these events. Are you surprised by the stress associated with them? How many have you encountered this year?

Figure 19. Items from the Social Readjustment Rating Scale and Associated Stress Points

Life Event	Associated Stress
Death of a spouse	100
Divorce	73
Death of a close family member	63
Marriage	50
Gain a new family member	39
Change in responsibilities at work	29
Outstanding personal achievement	28
Change in working hours	20
Change in sleeping habits	16
Vacation	13
Christmas	12

Mindfulness Meditation

Key Point

Mindfulness Skills:

- Awareness
- Being in the present moment
- Non-judgmental observation

While **Mindfulness Meditation** is relatively new to Westerners, its roots are over 2,500 years old. Mindfulness meditation was branded and popularized for Westerners by Jon Kabat-Zinn, Ph.D. in the early 1990s. Mindfulness meditation has been evaluated in National Institutes of Health funded studies and has been shown to be effective for reducing stress and improving coping, pain management, immune function and symptoms of chronic disease. For example, a randomized clinical trial showed that people who participated in the Mindfulness Based Stress Reduction (MBSR) program at work showed positive changes in brain activity, emotional coping, and immune functioning.[84] Mindfulness meditation has also been associated with increased immune functioning, coping ability, and quality of life in newly diagnosed breast cancer patients.[85] Finally, after completing an MBSR program, individuals' MRI scans revealed increases in grey matter in brain areas involving learning and memory, emotion regulation, and empathetic responding.[86]

The Mindfulness Based Stress Reduction Program (MBSR) program is a standardized program that combines mindfulness training, meditation, and Hatha yoga. The program is typically delivered over eight weeks in two-hour, weekly sessions, an all-day session, and 45-60 minutes of daily practice between classes. The program is currently offered at hundreds of hospitals and clinics around the world. These benefits are well known to people who maintain a physical yoga practice of 30 to 60 minutes and practice meditation for as little as 15 or 20 minutes a day, or most days of the week.

What is mindfulness? Mindfulness is the ability to be aware of your thoughts, emotions, physical sensations, and actions—in the present moment—without judging or criticizing yourself or your experience. In other words, mindfulness is a practice of "being in the moment." However, this is not easy! Coupled with the demands of modern living that encourage multitasking, the human mind wanders and we are in a constant state of feeling, sensing, and doing. For example, as you are reading this text, you may be taking in the information, but you may also be thinking about what you need to get at the grocery store or a comment that someone made over lunch. You may notice that you are bored, that you wished you were not here, or you may feel tired or have a sore neck.

All of these thoughts, feelings, and sensations distract you from fully taking in the present moment. As you continue to dwell on life experiences that you wished you were having, e.g., being at home instead of work, or the feeling you are experiencing, e.g., boredom, discontent brews. By focusing on your discontent, wishing it would go away, and attempting to push it away, you miss out on simple opportunities that could heal you from that which currently pains you, and move you to a place of acceptance. Mindfulness calls on us to stop, breathe, pay attention, observe, and respond non-judgmentally to all of our experiences, internal and external.

Mindfulness practices involve three skills: The first is *awareness*. This refers to focusing your attention on one thing at a time, and being aware of all perceptual experiences that are going on around you, e.g., sight, smell, as well as what is going on inside of you e.g., thoughts and feelings. The second skill is *being in the present moment*, as opposed to being caught up in thoughts about the past, i.e., rumination, or the future, i.e., worry. One facet of this skill is to resist going through the motions or being on autopilot. Instead, mindfulness calls us to be an active participant in our experiences. Finally, *non-judgmental observation* refers to looking at your experience with just facts, not labeling any experience as good or bad, but rather, objectively.

Yoga

Like mindfulness, **Yoga** is an ancient practice. Meaning "to join," yoga is a mind-body practice that incorporates the regulation of breath, meditation, and various body postures. While there are many schools of yoga and yogic practices (some more or less aligned with its roots), the traditional goals of yoga are to achieve clarity of mind, peace, and body awareness - not just flexibility or challenging poses. Further, yoga is not a religion, but like most religions, it does advocate compassion and avoiding thoughts and behaviors that can bring harm to you or others.

Hatha yoga refers to yoga poses and breathing. *Poses or asanas* are movements designed to increase blood flow, flexibility, and balance. The *breath* is seen as the vital energy in yoga. Yoga teaches that if you can control your breath, you can control your mind and the ability to cope with situations. Many universities and medical schools are studying yoga and it has been shown to reduce stress,[87] improve balance and coordination,[88] and it is helpful in managing chronic conditions such as depression,[89] cancer,[90] high blood pressure,[91] and chronic pain.[92] Health systems including the Mayo Clinic routinely offer yoga and chair yoga for patients and older adults with chronic illness and pain. In fact, Iyengar yoga is considered one of the most effective interventions for lower back pain.[93] A regular asana practice (daily or alternate days, an hour or more in duration) can keep your body in great shape and your mind calm and focused.

Tai Chi and Qigong

An ancient Chinese martial art practice, **Tai Chi** is now gaining popularity in adult and senior populations as an activity for building muscle strength, flexibility, as well as physical and emotional balance. Like yoga, it is a mind-body practice composed of meditative practices and gentle movements of the body. For this reason, Tai Chi is sometimes referred to as meditation in movement.

The style of Tai Chi varies depending on the practice, with some putting greater emphasis on the martial art aspect and others concentrating on the meditative quality. Most forms are gentle for everyone, and because Tai Chi is low impact, noncompetitive, requires no equipment, and can be done alone or in a group setting, it is ideal for people of all ages.

Tai Chi has been shown to reduce the fear of, and number of, falls in elderly populations,[94] and improve endurance and quality of life in patients with heart failure.[95] Further, a randomized trial investigating Tai Chi's effect on older adults' brain volume and cognition found that while both Tai Chi and social interaction with others increased brain volumes, only participants who practiced Tai Chi showed marked improvements on several neuropsychological and cognitive measures.[96]

Related to Tai Chi is Qigong. **Qigong** is an exercise that focuses on balancing life energy, or "qi" (pronounced chi) through a series of fluid movements coordinated with the breath. Qigong combines physical, breathing, and attention practices to form four different training experiences. *Dynamic training* concentrates on fluid movements coordinated with breathing practices. This type of training most closely resembles Tai Chi. *Static training* involves holding poses for extended periods of time and is closely related to yoga. *Meditative training* utilizes the breath, visualization techniques, or mantra to encourage qi circulation. Finally, *external agents,* such as massage or use of herbal remedies support the practice of Qigong. Qigong is a gentle form of exercise with no impact or strain on joints. It encourages balance, proprioception, and builds awareness of the body in space. Given these components, this exercise is ideal for older adults, and those recovering from physical injuries.

Ways to Quit

Today smokers have a number of behavioral strategies and pharmacological aids that can increase the chances of quitting. The psychological part of smoking is harder to beat because smoking becomes associated with so many activities, e.g., waking up in the morning, eating, drinking coffee, reading, watching TV, driving. When a patient first quits, their body will miss this link and in addition, it will begin to undergo physical and emotional changes, e.g., cravings. It's important to remind patients that the physical withdrawal symptoms will pass within 30 days. Although health coaching strategies will be reviewed in Module 4, if a patient indicates that they are interested in quitting smoking, ask them about previous quit attempts, which strategies they found helpful or not helpful, as well as what they learned from the experience. Once an understanding of a patient's previous quit history has been established and the patient is still interested in quitting, elicit a patient's thoughts about creating a quit plan. If the patient seems interested, help the patient devise a **Quit Plan**. A quit plan may include a quit date, environmental changes (e.g., remove ashtrays from home, tell family and friends of plan), steps for dealing with difficult situations or relapse, e.g., how they will handle stress, bad moods, which medications they may use, a list of social supports (family and friends they can go to for support), and finally, how they will reward themselves for sticking to their plan. Refrain from suggesting any unsolicited strategies for the plan, and instead, defer to the patient's thoughts and ideas about what would make an ideal and successful plan. For individuals who smoke ten or more cigarettes a day, smoking cessation aids can double the risk of quitting and are generally recommended.[109] Various types of medications are available: Lozenges, pills, nicotine replacements, inhalers, and sprays. Figure 22 reviews each of these methods along with popular brands, how to obtain them, how each is used, and the duration of use.

Figure 22. Review of Medication to Aid in Smoking Cessation

	Pills	**Nicotine Replacement Therapy**
Medication Name	Chantix, Buproprion, Zyban	Patch (Nicoderm CQ, Habitrol) Gum (Nicotine gum, Nicorette)
How to obtain it	With a prescription	With a prescription, or, over the counter
How it works	Pills do not contain nicotine, but stimulate the chemicals in the brain affected by nicotine.	Nicotine is delivered in a steady amount throughout and therefore is slower in its release.
How it's used	Smokers do not have to stop smoking when they first start taking pills. It is most beneficial to start taking the pills before the quit date to help the drug build up in the body.	**Patients cannot smoke while using nicotine replacements.** The patch works by applying it to different parts of the body every day.

FOUNDATIONS OF HEALTH COACHING

The Health Coaching Phenomenon

The term health coaching has become part of the lexicon of health care. Yet, when asked to cite supporting evidence or best practices for this intervention, or, describe how proficiency is developed or assessed, health coaches are often hard-pressed for answers. Many practitioners are understandably unfamiliar with the decades of existing research on health behavior change conducted in leading medical schools and graduate programs. In addition, misperceptions about health coaching—though debunked in the clinical research and practice literature—have slowed progress. Among these:

1. Since health coaching sounds so positive it probably works or at least can't hurt;
2. Health coaching is a behavioral approach and nurses (and particularly mental health providers) should be proficient in it; or,
3. Building proficiency in health coaching is easy. The latter misperception is perhaps best illustrated in the title of a 2008 health coach training text authored by home care nurse, motivational speaker and marketing professional founders of a National Society of Health Coaches (NSHC): *Health Coaching Made Easy for HealthCare Providers*.[24]

To a large degree the health coaching phenomenon can be attributed to the popular health coach training and certification programs adapted in recent years from life coaching approaches originally developed for personal, fitness or executive coaching settings. By contrast, the first text on motivational interviewing (MI) was published over 30 years ago. The main body that certifies life coaches, the International Coach Federation (ICF), founded in 1995, defines coaching as "partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and professional potential." According to the ICF, coaches help people "clarify their mission, purpose and goals, and help them achieve that outcome (sic)." While the life coaching field has attracted more professionals who have contributed to life coaching theory, approaches and research,[25] the evidence for it's efficacy in health care has been limited to testimonials from health coaches and unverified marketing claims.

Although there are scores of health coach training programs, theories and approaches based on life coaching, life coaching was never designed or intended for use by clinical or nonclinical practitioners in formal health care settings —and there are serious limitations and concerns with doing so (summarized in Figure 9).[23] To address this gap, lay developers have supplemented these programs with content and jargon from the fields of positive psychology, intrinsic motivation, communications theory and MI—even independently authoring training texts on the psychology of health coaching.[26] As a consequence, complex theories or interventions like MI are frequently misinterpreted or oversimplified, only selected or flawed studies that support the approaches are cited, or pop psychology is represented as science. Collectively, this has compromised the credibility, outcomes, and advancement of health coaching as a health care intervention.

Credentials Based on Science and Proficiency

In an effort to raise the bar on the practice of health coaching, a Registered Health Coach (RHC) program was developed by HealthSciences Institute following a thorough review of the behavioral science research and validated standards for health coaching proficiency and practice. RHC is the first and only health coaching training ladder and credential grounded in the science of health behavior change and integrated with a core curriculum in evidence-based chronic care, wellness, disease management and MI-based health coaching (Chronic Care Professional Health Coach Program).[34] Further, RHC is the only training program and credential based on proficiency in evidence-based approaches. These evidence-based approaches are directly linked with better engagement and patient level change across the care continuum, and are developed and vetted by credentialed subject matter experts in medical psychology, health psychology, behavioral medicine, MI and competency development, and other health care fields.

What is the Ideal Health Coaching Approach?

If traditional patient education and popular life coaching approaches fail to meet the standards for effective health care interventions, what is the ideal health coaching approach for practitioners working in today's health care settings? The ideal approach must meet the following requirements:

- Appropriate for use across the care continuum—from well to seriously ill, younger to older, and less or more educated or verbal;
- Practical for use in most any type of patient encounter, no matter how brief;
- Appropriate for any member of the formal or informal health care team, including clinical and nonclinical staff, behavioral and non-behavioral health professionals, as well as peer or community-based volunteers;
- Backed by validated steps for teaching and building proficiency in the approach;
- Supported by standardized, validated tools to assess practitioner proficiency in the approach;
- Patient-centered, but flexible enough to allow practitioners to apply their clinical expertise and address clinical priorities; and
- Proven to deliver better patient-level outcomes in rigorous research studies.

There is only one approach that currently meets the above criteria: MI. Today health care practitioners around the world are using MI and MI training workshops are offered in 43 different languages.

LEARN MORE

For a complete bibliography of MI literature go to:
http://motivationalinterview.org/quick_links/bibliography.html

Module 4 | MOTIVATIONAL INTERVIEWING HEALTH COACHING

ORIGINS AND EVIDENCE BASE FOR MOTIVATIONAL INTERVIEWING

William R. (Bill) Miller, a clinical psychologist and addictions counselor, founded MI over 25 years ago. In a recent article, Miller describes the very early rendition of MI, whose early underpinnings still stand in current times, even after much research and standardization.[27] After promising outcomes from the application of MI in addictions treatment, Miller met and collaborated with Steve Rollnick, another clinical psychologist from Wales, United Kingdom, to further develop the MI approach and disseminate its practice. Rollnick was one of the first to apply MI to the health care setting and is considered, along with Miller, the co-founder of MI.[35]

A guiding principle of MI is that the patient, rather than the practitioner, voices the arguments for behavior change. Since the early 1980s, over 300 clinical trials have demonstrated efficacy for the MI approach across multiple settings, health topics and populations. Several recent meta-analyses with rigorous methodology have reinforced the evidence for this patient-centered approach. In a health coaching review that compared different approaches, MI was the only approach to be fully described and consistently demonstrated as being causally and independently associated with positive behavioral outcomes.[36] In fact, a systematic review of the literature demonstrated that MI outperforms traditional advice-giving in the treatment of a broad range of behavioral problems and diseases.[37]

MOTIVATIONAL INTERVIEWING IN HEALTH CARE

Research in the application of MI in health care has grown exponentially in the last decade.[38] In 2008, a milestone was the release of the Rollnick, Miller and Butler publication *Motivational Interviewing in Health Care: Helping Patients Change Behavior*, which featured a review of research of MI in health care, along with applications of MI in health care.[39] Since then, there have been dozens of rigorous studies indicating the effectiveness of the MI approach in health care. MI has since been shown to be effective in improving general health status or well-being, promoting physical activity, improving nutritional habits, managing weight, encouraging medication adherence, improving smoking cessation rates, and managing chronic conditions such as hypertension, hypercholesterolemia, obesity and diabetes.[40]

Concurrently, MI researchers have been building on initial studies of MI behavior change (primarily from the addictions and counseling fields), to describe and target the underlying mechanisms, factors and unique considerations regarding the use of MI in health care. Encounters in health care have important differences, e.g., patient contacts are often five to ten minutes in length, health care practitioners are often under pressure to achieve clinical outcomes, and MI approaches need to fit the roles of a range of practitioners, at a variety of levels.

The following behaviors or types of talk are critical to the practice of an evidence-based health coaching approach and the training of general practitioners and health coaches:

- Behaviors/types of talk from the *patient* during an encounter with a practitioner; and
- Behaviors/types of talk from the *practitioner*.

Patient Behaviors

Possibly the most important research to date is research that has identified three different types of patient talk that predict clinical outcome: Miller et al., then Amrhein et al., identified what is now called **Change Talk**, **Sustain Talk**, and **Discord**.[41-42] Sustain Talk and Discord are types of **Counterchange Talk**.

Counterchange Talk consists of statements for the status quo or against change, whereas Change Talk consists of statements for change–the desire, ability, reasons, and need for change–along with commitment, activation, and steps being taken towards change. Multiple recent studies have found that patient Change Talk, which emerges during an encounter, is a powerful predictor of change and is correlated with positive clinical outcome. Alternatively, Discord that emerges during an encounter is a negative predictor of change and is correlated with negative clinical outcomes.[43-50] Of note, Moyers et al. found that although Change Talk is predictive of better outcomes, it frequently occurs nearly simultaneously with Sustain Talk.[48]

The result of this research has been an increased emphasis on training practitioners to evoke Change Talk from the patient in order to increase commitment strength to the change in order to increase the odds of the individual taking action. This underlying mechanism of MI is thought to be a key element behind the efficacy of the approach and is backed by several theories in behavior change science:

1. The *Health Belief Model,* which identified how important it is for individuals to recognize the benefits of a behavior change;[17]
2. The *Implementation Intentions Model,* which addresses the importance of addressing intentions in promoting behavior change;[51] and
3. *Bem's Self-Perception Theory,* which indicates that people can talk themselves into feeling more strongly about one side of their ambivalence and towards taking action if encouraged to do so.[52]

Patient Talk

There are three types of patient talk.

Change Talk: Statements in favor of change. The more change talk that is evoked during an encounter, the higher the commitment strength to the change and the more likely a positive clinical outcome. An important skill in MI is evoking and responding to Change Talk. This emphasis on evocation of Change Talk is what separates MI from other health coaching approaches.

Sustain Talk: Statements that represent ambivalence about change. This is a type of Counterchange Talk that is a normal and expected part of the change process. Practitioners are taught in MI to use this talk as a guide to validate the challenges and help the patient to work through ambivalence to more clearly define what is of value and what the benefit of change might be as compared with the benefits of staying the same.

Discord: Statements that represent an interpersonal tension between the patient and practitioner. This is another type of Counterchange Talk that occurs when the practitioner fails to resist the righting reflex (need to direct or fix) and falls back into the traditional Medical Model approach. This type of Counterchange Talk should be avoided and is predictive of negative clinical outcome. Therefore, unlike Sustain Talk, Discord is an indicator for the practitioner to change his or her approach.

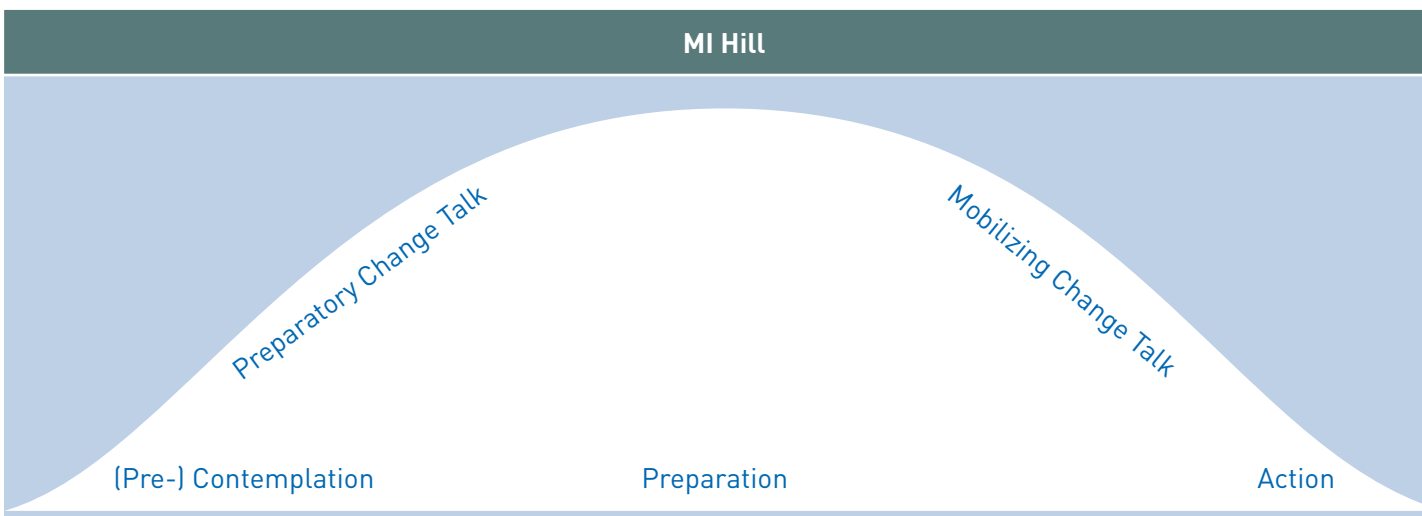
Worst-Case Scenario in Health Coaching

Health care practitioners are well-intentioned; they care about their patients and would like to see them adhere to treatment guidelines and take good care of their health. However, this can lead to a 'fix it' perspective that in MI is referred to as the **Righting Reflex**.[54] In turn, this can lead to the types of MIIN practitioner behaviors described above, i.e., confronting, pushing, advising without permission. These behaviors can result in Discord or interpersonal tension since, in most cases, patients resist being judged, pushed or advised. The resulting interpersonal tension feels like wrestling to both the patient and the practitioner. While this struggle might be worth it if there were positive outcomes as a result, unfortunately, multiple studies have indicated that tension or Discord caused by the righting reflex is correlated with negative clinical outcomes. In other words, the **Worst-Case Scenario** in health coaching involves the practitioner is arguing for the change while the patient is arguing against it.

Best-Case Scenario in Health Coaching

In the last decade of rigorous research, it has become very clear that a practitioner's approach can influence the way a patient responds to a discussion about behavior change. As summarized earlier, when a practitioner uses an MI consistent approach, i.e., affirming, supporting, asking for permission before sharing information, and when a patient receives non-judgmental unconditional positive regard from the practitioner for where he or she is in the change process, he or she feels accepted and is more ready to discuss change. As a result, the patient is more likely to discuss possible benefits for the change, or Change Talk. This includes what is called Preparatory Change Talk, i.e., their desire, ability, reasons and need for change, along with what is called Mobilizing Change Talk, i.e., their commitment towards the change, activation towards change and steps that they are already taking.[56] This represents the Best-Case Scenario in health coaching. Therefore, after the patient is engaged, it is critical that special attention be focused on evoking and strengthening change talk as shown in Figure 11.[27]

Figure 11. The MI Hill



Practice Tips | Being Selective with Open Questions

Setting the Agenda	∘ What worries you the most about your health right now? ∘ What do you think the one change would be that would improve your health the most, that you would be willing to do?
Assessing Importance; Confidence	∘ You said that your doctor really wanted you to lose weight to manage your diabetes better. How important do you think this is? ∘ So, quitting smoking is your long term goal. How confident are you that you can do this?
Addressing Barriers and Support	∘ You've put together a nice plan to walk every day. What could get in your way in these next few weeks of making this happen? ∘ Who or what could help you put this eating plan into action?

Practice Tips | Providing Effective Affirmations

More Effective

- Focuses on patient's efforts and traits
- Provides support and empathy
- Empowers patient to take charge of health

Less Effective

- Begins with "I"
- A compliment about something that the patient has no control over
- Implies judgment

AN MI-BASED HEALTH COACHING FRAMEWORK

In their 3rd edition, Miller and Rollnick unfold a health coaching framework to provide structure for practitioners applying an MI-based approach in a clinical setting.[54] This model is similar to an earlier framework for MI-based health coaching proposed by HealthSciences Institute and included in the 2008 Chronic Care Professional (CCP) program (4th Edition). This framework also consisted of four similar stages: Establish Rapport, Set an Agenda, Explore Change Readiness, Negotiate and Action Plan.[63] To support a common vocabulary, this model has been updated with the Miller and Rollnick model.

The four phases of the Miller and Rollnick model are **Engaging**, **Focusing**, **Evoking** and **Planning**.[54] As portrayed in Figure 16 and underscored by Miller and Rollnick, while these steps do naturally emerge in the order described, they are overlapping, i.e., one step does not end as the next begins and each process may flow into a previous or subsequent step. For example, we re-engage with patients at each visit; and, during the planning phase, we may refocus when a patient defines steps for behavior change that are unclear or overambitious.

Figure 16. Four Overlapping Processes in MI: MI Health Coaching Framework

Module 4 | GLOSSARY

Best-Case Scenario
A health coaching situation in which change talk is evoked from the patient. Change talk is directly linked to the level of commitment strength of the patient to change.

Change Talk
Patient statements in favor of a behavior change. Change talk is strongly linked to positive clinical outcome in the clinical research.

Chunk-Check Method
A strategy whereby the practitioner presents a manageable 'chunk' of information, and then checks with the patient to see if he or she has any questions and understands before sharing another chunk of information.

Coding
Using a validated, standardized tool such as the MITI or HCPA to measure the fidelity of a health coaching encounter or health support program to an evidence-based approach and the proficiency of the practitioner in the approach.

Complex Reflections
Reflections that capture the meaning, significance, or feeling that was inherently implied by the patient. Complex reflections tend to be more effective than simple reflections as the patient is more likely to feel understood and accepted.

Counterchange Talk
Patient statements for the status quo or against behavior change. Includes discord and sustain talk.

Cultural Competence
Acceptance of the value of differing perspectives and beliefs that arise from ethnic, cultural and religious diversity, sexual orientation or identity. Accommodate services and options, as required, to support engagement.

Decisional Balance
A tenet of the transtheoretical model that holds that, in order to progress through the stages of change, the patient needs to recognize that the personal advantages (the pros) of change outweigh the disadvantages (the cons).

Discord
A type of counterchange talk that reflects tension between the patient and practitioner. Discord often results from the practitioner failing to resist the righting reflex (need to direct or fix).

Double-sided Reflections
An advanced type of reflection that captures the patient's ambivalence by forming a compound sentence. The first part of the sentence validates the barrier or challenge to change that the patient has shared; the second part reflects back the change talk.

Elicit-Provide-Elicit (E-P-E)
A three-step method of providing information. First, the practitioner elicits what the patient already knows about the topic; second, the practitioner fills in gaps, corrects misconceptions held by the patient and provides information; third, the practitioner elicits the meaning or significance of the information to the patient.

Engaging
The first phase of the MI health coaching framework which sets the foundation for the health coaching session by establishing rapport with the patient.