

Exercise
is Medicine[®]
Greenville, SC

***Design and Implementation of
Exercise is Medicine Greenville[®]:
The Power of Provider-Prescribed Physical Activity***

**CDC Arthritis Management and Wellbeing Recipient and Partners Meeting
October 19, 2023**

Jennifer L. Trilk, PhD, FACSM, DipACLM
Founder and Director: Exercise is Medicine Greenville[®]
Professor: Lifestyle Medicine
University of South Carolina School of Medicine Greenville



Faculty Disclosure

In compliance with ACGME Guidelines, I hereby declare:

- I do not have financial or other relationships with the manufacturer(s) of any commercial product(s) or provider(s) of any commercial services(s) discussed in this educational activity.

Jennifer Trilk, PhD, FACSM, DipACLM

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

CDC > National Center for Chronic Disease Prevention and Health Promotion



National Center for
Chronic Disease
Prevention and Health
Promotion

About Chronic Diseases

Health and Economic
Costs of Chronic Diseases

How You Can Prevent
Chronic Diseases

About the Center +

Our Programs and Impact +

Chronic Disease Data +

Publications, News, and
Media +

Tools and Resources +

Get Email

About Chronic Diseases

Six in ten adults in the US have a chronic disease and four in ten adults have two or more.



Chronic diseases are defined broadly as conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both. Chronic diseases such as [heart disease](#), [cancer](#), and [diabetes](#) are the leading causes of death and disability in the United States. They are also leading drivers of the nation's \$4.1 trillion in annual [health care costs](#).

Many chronic diseases are caused by a short list of risk behaviors:

- [Tobacco use](#) and exposure to [secondhand smoke](#).
- [Poor nutrition](#), including diets low in fruits and vegetables and high in sodium and saturated fats.
- [Physical inactivity](#).
- [Excessive alcohol use](#).



How You Can Prevent Chronic Diseases

Health and Economic Costs of Chronic Diseases

Prevalence of Arthritis in the United States

National Prevalence

- Based on data from the National Health Interview Survey (NHIS), during 2016 – 2018, an estimated 58.5 million US adults (23.7%) had ever been told by a doctor (doctor-diagnosed) that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.¹
- The [NHIS](#) collects data on a broad range of health topics through personal household interviews with US adults.

Prevalence by State

- Based on data from the Behavioral Risk Factor Surveillance System (BRFSS), the percentage of adults with arthritis varies by state, ranging from 17.2% in the District of Columbia to 41.4% in West Virginia in 2019.²
- Learn more about [state-level arthritis statistics](#)
- To view arthritis prevalence estimates by state, go to the interactive map on the [Chronic Disease Indicators database](#) and select a state on the map.
- The [BRFSS](#) collects health-related data on US residents in each state and is the data source for the information on states, counties, and cities on this page.

Prevalence by County

- The percentage of adults with arthritis varies considerably by county, ranging from 11.2% to 42.7% in 2015. Learn more about [county-level arthritis statistics](#) (BRFSS).³
- To view arthritis model-based prevalence estimates by county, go to the interactive map on the [Chronic Disease Indicators database](#) and select a state on the map.

Prevalence by Small Areas

- To view arthritis prevalence estimates by census tract, county, incorporated and census designated place, and Zip Code Tabulation Area, go to the interactive map on [PLACES](#) and select location type.

[Top of Page](#)

Physical Activity Programs

[Print](#)

Studies show that [physical activity](#) can reduce pain and improve function, mood, and quality of life for adults with arthritis. Physical activity is also important for the management of other chronic conditions that are common among adults with arthritis, such as diabetes, heart disease, and obesity.

Several community-based, structured physical activity programs are proven to reduce arthritis symptoms and teach participants how to safely increase their physical activity to manage arthritis and other chronic conditions. Learn more about effective physical activity programs for yourself or to implement in your community.



Exercise is Medicine[®] Greenville, SC



The solution to one of the greatest health problems of the 21st century

Exercise is Medicine[®] (EIM) is a global health program designed to improve the health and well-being of people in our community through a prescription of physical activity, lifestyle changes and education from physicians and healthcare providers. EIM is committed to establishing physical activity as a standard in health care and is integral in the prevention and treatments of diseases.

Timmie is an absolute joy! She was here today because SHE wanted to make a lifestyle change, not because her doctor told her she had to. She told me she wanted to set goals for herself and reach them so she could be the "poster child for EIMG" (her exact words)

Connect your patients to 12-week physical activity program for the prevention and treatment of chronic diseases through Exercise is Medicine Greenville[®] (EIMG[®])

Vision

EIMG[®] inspires health by establishing physical activity and lifestyle changes as a standard of care for the prevention and treatment of physical inactivity, obesity and chronic diseases.



Mission

EIMG[®] is committed to compassionately improving the health and well-being of South Carolina Upstate residents by providing physical activity and lifestyle changes where people live, work, and play, regardless of their ability to pay.

What is EIMG[®]?

A clinic-to-community referral program guided by trained exercise professionals

- Already integrated in the Prisma Health EHR
- Used by 27 Prisma Health clinics
- Connects patients to 12-week community-based physical activity programs

Where is EIMG[®] Available?

The EIMG[®] network supports physical activity programs offered by 7 community partners:

- Prisma Health Life Center
- Greenville County YMCAs
- Oconee County YMCA

Design: 2013-2014

- Mary Jane Rogers, Prisma Health System Information Technology
 - Approval and Programming of the Exercise Vital Sign (EVS) into EPIC
- Scot Baddley, YMCA Chief Executive Officer
 - Partnership as the Community Care Team to deliver the EIMG Program
- Angelo Sinopoli, MD, Prisma Health Chief Medical Officer
 - A promise to deliver a high-quality, liability-mindful, EIMG Program around Total Health
 - 4 goals: reduce Obesity, A1c, Hypertension, and Dyslipidemia in Greenville Community



Design: 2014-2015

- Training and Credentialing of 24 EIM Professionals
- Proposal to Prisma Health for EIMG[®] Referral Coordinator
- 4-week “Operations Flow” (e.g. dress rehearsal) of Prisma employees
- *RedCap* Data Collection Training
- Prisma/YMCA/EIM Approval of Co-Branding and Marketing



Implementation: 2015-2016

- EVS becomes enterprise across Prisma Health for adults
- Approval and hire of EIMG[®] Care Coordinator
- Pilot EIMG[®] with 2 clinical practices
 - Internal Medicine and Family Medicine
- Completion of EIMG[®] electronic referral pathway to YMCA
 - Provider Education provided through *Health Stream* and In-person
- EIMG[®] Program Design Task Force established
- EIMG[®] Advisory Board and Research Steering Committee established



Read Dr. Masocol's Commentary "Exercise can be potent medicine," recently published on Greenville Online.

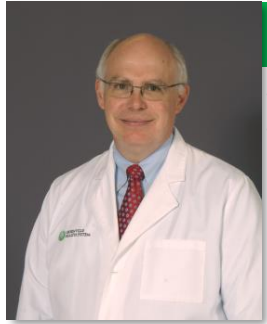
Robert Masocol, MD, is a physician at Greenville Health System's Center for Family Medicine. He fellowship trained in both family medicine and sports medicine at GHS.





**THE SOLUTION TO ONE OF THE GREATEST
HEALTH PROBLEMS OF THE 21ST CENTURY.**

Advisory Board Established 2016



Peter Tilkemeier, MD

- Medical Director, EIMG[®]
- Chair, Internal Medicine



Jennifer L. Trilk, PhD

- Program Director, EIMG[®]
- Co-PI, EIMG[®]
- Professor USCSOMG



Peter Carek, MD

- Medical Director, EIMG[®]
- Chair, Family Medicine



Sam Franklin

- Chief Operating Officer
YMCA of Greenville



Mark Stoutenberg, PhD

- Exercise is Medicine Global
- American College of Sports
Medicine
- Co-PI, EIMG[®]



Libby Boerger

- Manager of Life Center



Phyllis MacGilvray, MD

- Senior Associate Dean of
Academic Affairs

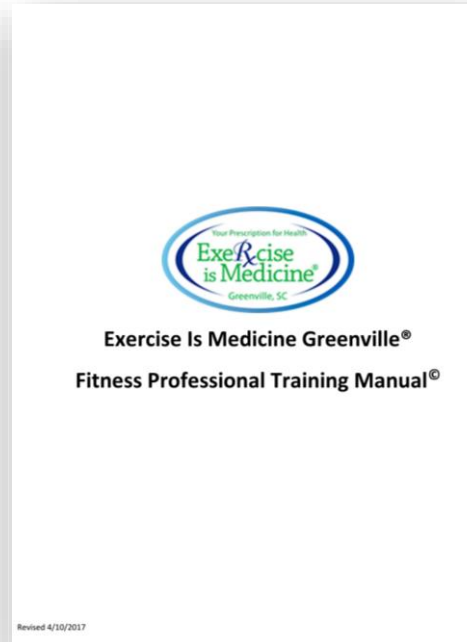
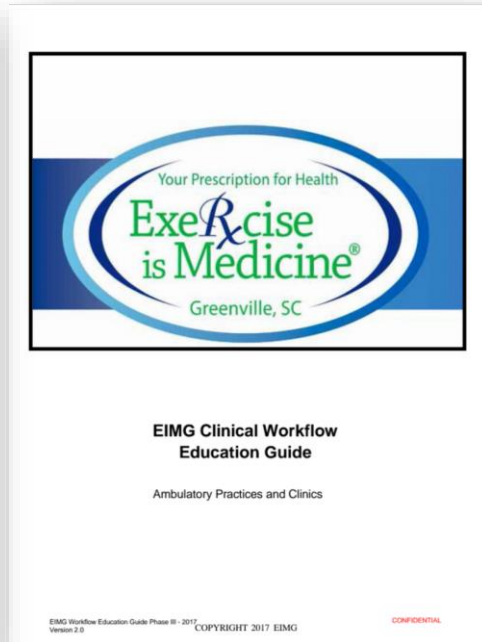
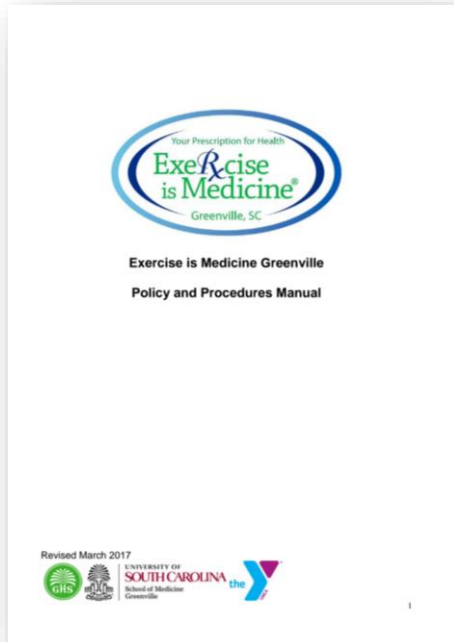


Mary Jane Rogers, RN

- Manager, Clinical Informatics

Launch and Scale: 2016-2018

- August 2016 Pilot Launch of EIM Greenville® and Press Release
 - 4 Practices (2 Internal Medicine, 2 Family Medicine)
- Started scale-up in 2017: Systematically added practices as requested
 - 2018 Considered “At Maturity”
- Development and Dissemination of EIMG® Toolkit
 - Now available open sourced via USCSOMG request



THE POWER OF PHYSICIAN-PRESCRIBED PHYSICAL ACTIVITY

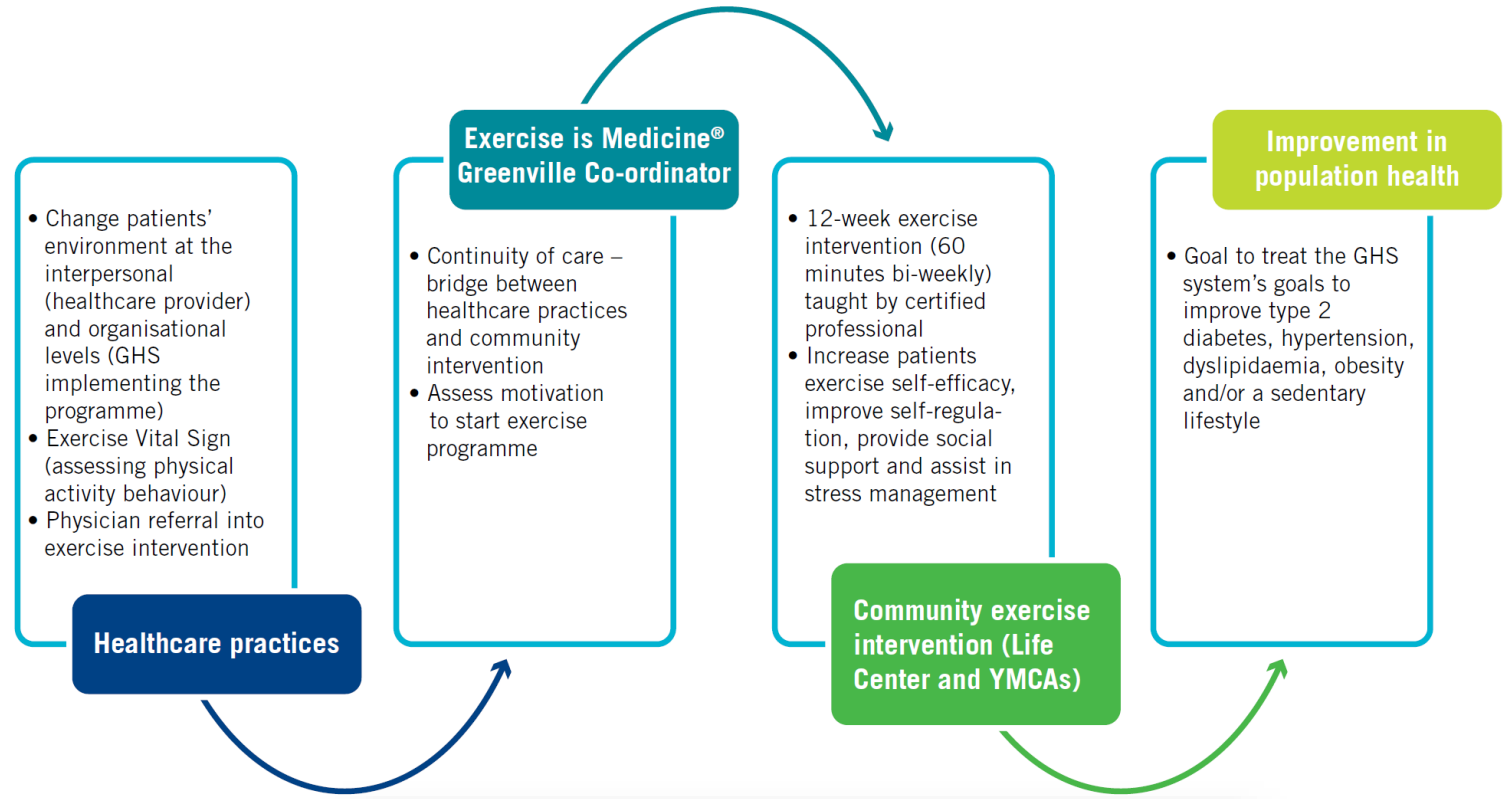
THE EXERCISE IS MEDICINE® GREENVILLE PROGRAMME

– Written by Jennifer L. Trilk and Ann Blair Kennedy, USA

According to the World Health Organization (WHO): “by 2020, two-thirds of global diseases will be the result of lifestyle choices that include lack of exercise and overall physical activity, poor diet and obesity.” In the United States, according to the Center for Disease Control and Prevention, chronic diseases such as diabetes, heart disease, stroke, cancer and chronic respiratory diseases are the leading causes of mortality, representing 50% of all deaths and 86% of healthcare costs annually². In the local community of Greenville, SC, USA, the South Carolina Department of Health and Environmental Control report that of the adults in Greenville County, nearly 28% lead a sedentary lifestyle, 68% are overweight or obese, 44% have high lipid levels, 40% have

hypertension, 12% are diabetic and 7 to 8% are prediabetic^{3,4}. Lifestyle and obesity-related diseases are emerging as a major driver of rapidly growing healthcare costs. For example, in Greenville County the estimated cost of physical inactivity in 2013 was \$1956 per adult, almost twice as much as to the United States average of \$1050 per adult. Diabetes alone is the seventh leading cause of death in South Carolina, claiming 1186 lives in 2012 and total direct costs of hospitalisations and emergency room visits related to diabetes in Greenville County were over \$4.7 billion in 2012^{5,7}. Therefore, helping people to make healthier diet and lifestyle choices has become increasingly critical. Additionally, the United States healthcare environment

is shifting payment away from episodic sickness-based fee-for-service care, toward payment mechanisms that financially reward physicians who successfully promote healthier lifestyle behaviours in their patients, also called ‘value-based care’⁸. Recognising the opportunity for reducing morbidity, mortality and healthcare costs by increasing levels of physical activity, the World Health Assembly adopted the WHO Global Strategy on Diet, Physical Activity and Health to promote regular physical activity for the prevention of chronic diseases⁹. A change in physical activity behaviour nationally, as well as globally, would have a major impact on population health management by preventing, reducing and/or reversing morbidity and mortality



The goal is to place opportunity for health behaviour change at the centre of the patient's life, in the community where they live, work and play

Participating Practices

39 Participating Clinics; Reach > 400 miles²

Department of Family Medicine

- CFM Greenville**
- Greenville Family Medicine**
- Family Medicine Mountain View**
- Travelers Rest Family Medicine**
- Riverside Family Medicine-Eastside**
- Travelers Rest Family Medicine**
- Woodward Adult Family Medicine**

Specialty Clinics

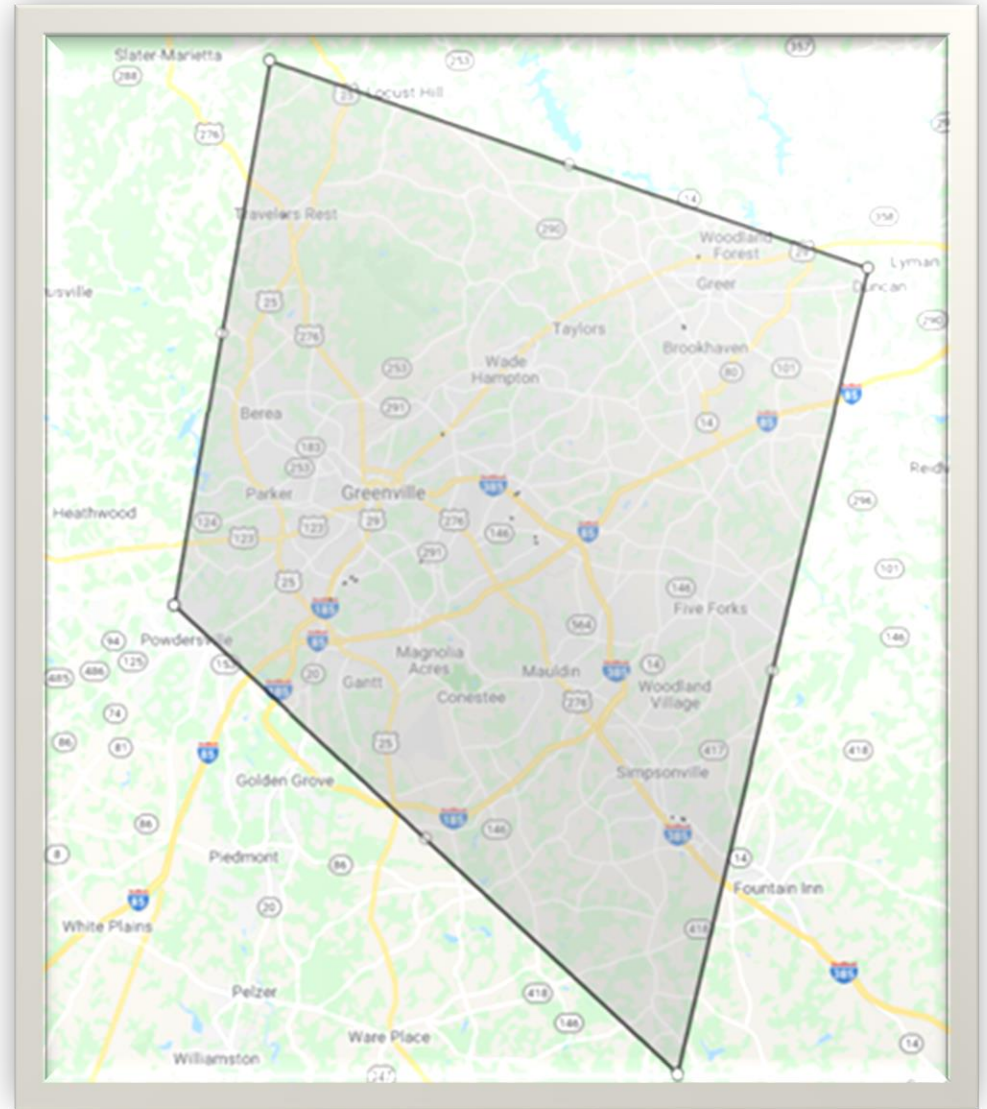
- Diabetes Prevention Program**
- Cancer Institute CIOS**
- Weight Management Institute**
- Endocrinology Specialists**
- OB/GYN Center**

Department of Internal Medicine

- Internal Medicine Clinic**
- Cross Creek Internal Medicine**
- Internal Medicine Associates**
- Heritage Pediatrics & IM**
- Cypress IM - Patewood**
- Internal Medicine-Simpsonville**
- Prisma Health Pediatrics & IM**
- Five Forks Internal Medicine**
- Carolina Internal Medicine**

Oconee Clinics

- CFM Oconee**
- Family Medicine – Walhalla**
- Mountain Lakes Family Medicine**
- FM & IM – Seneca (future)**
- Seneca Medical Associates (future)**



**Exercise
is Medicine[®]**
Greenville, SC

Community PA Facilities

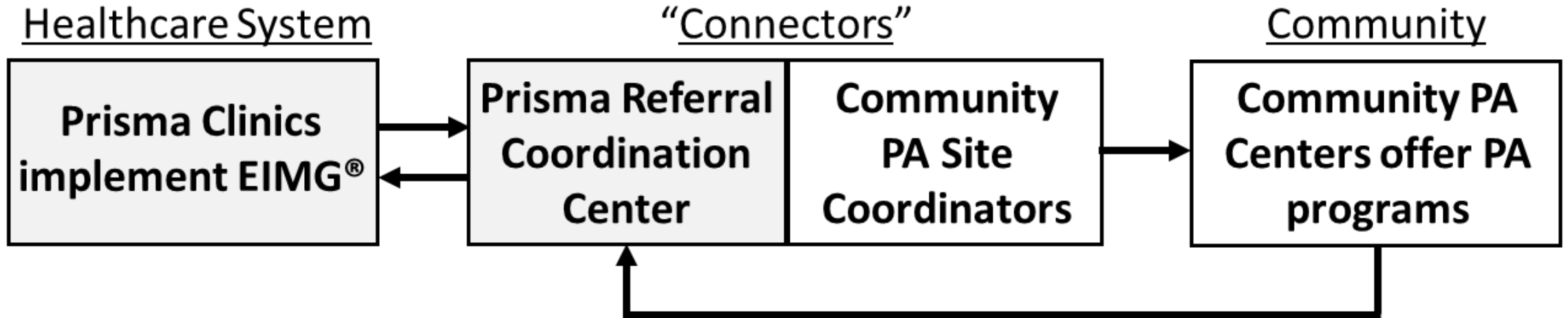
Area: >350 miles²

7 facilities in Greenville & Oconee Counties

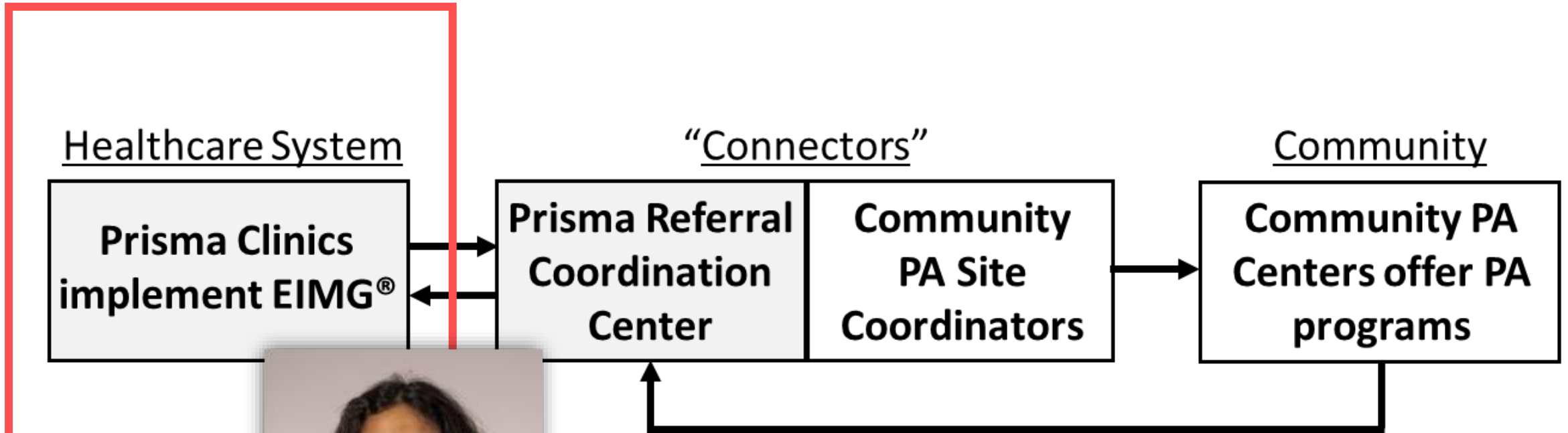


Prisma Health Life Center, Greenville
Caine Halter YMCA, Greenville
Prisma Health Family YMCA, Simpsonville
Eastside YMCA, Taylors
Verdae YMCA, Verdae
George I. Theisen YMCA, Travelers Rest
Foothills YMCA, Seneca (Oconee County)

Program Flow



Program Flow



Meenu Jindal, MD
Medical Director, Internal Medicine Clinic

EIMG Clinic Room Poster

Exercise
is Medicine[®]
Greenville, SC

Exercise is Medicine Greenville[®] (EIMG[®]) is proud to offer a 12-week program for adults who are looking to make a positive impact on their own health. The program includes 60-minute exercise and health education sessions that meet twice a week, and are led by an EIMG[®] Professional. An individual membership with unlimited access to the assigned EIMG[®] facility location is included during the 12-week program.



Who?

- Patients engaging in <150 min/week of physical activity
- Patients diagnosed with, or at-risk for, chronic health conditions (such as high blood pressure, Type 2 Diabetes, high cholesterol)
- Patients with abnormal BMI
- Patients with musculoskeletal weakness and/or pain

**Patients identified with high risk conditions may be referred to clinical rehabilitation programs.*

Where?

EIMG[®] is available at the following locations:

- PRISMA Health Life Center
- Caine Halter Family YMCA (Downtown)
- Verdae YMCA (Greenville)
- Eastside Family YMCA (Taylors)
- PRISMA Health Family YMCA (Simpsonville)
- George I. Theisen Family YMCA (Travelers Rest)

Cost?

- \$249 covers the full 12-week program (individual facility membership with program)
- (Financial assistance available based on income. Payment plan is available.)*

How?

- Request a referral from your Healthcare Provider

(Providers must review risk factors and co-morbidities for appropriate referral.)

Program Providers:

PRISMA
HEALTH

the Y
YMCA OF GREENVILLE

Uof
SC School of Medicine
Greenville

EIMG Brochure

Exercise
is Medicine®
Greenville, SC

VISION

Exercise is Medicine Greenville® inspires health by establishing physical activity and lifestyle changes as a standard of care for prevention and treatment of disease.

MISSION

Exercise is Medicine Greenville® provides an evidence-based, community program committed to compassionately improving the health and well-being of South Carolina Upstate residents through providing physical activity and lifestyle changes where people live, work, and play, regardless of their ability to pay.

EIMG® Program Coordinator
864-455-4392

EIMGreenville.org

Exercise
is Medicine®
Greenville, SC



**Exercise is Medicine Greenville®
(EIMG®) is proud to offer
A 12-WEEK PROGRAM
for adults looking to make a
positive impact on their health.**

"I can't be there with the patient at the gym, so I love knowing that there is someone there to encourage them and make sure they are progressing safely towards a healthier lifestyle."

-Prisma Health Internal Medicine Physician

WHAT?

60-minute exercise and health education sessions that meet twice a week for 12 weeks and are led by an EIMG® Pro Trainer

WHO?

- Patients engaging in less than 150 min/week of physical activity
- Patients diagnosed with, or at-risk for, chronic health conditions (such as high blood pressure, Type 2 Diabetes, high cholesterol)
- Patients desiring a healthier weight
- Patients with musculoskeletal weakness and/or pain

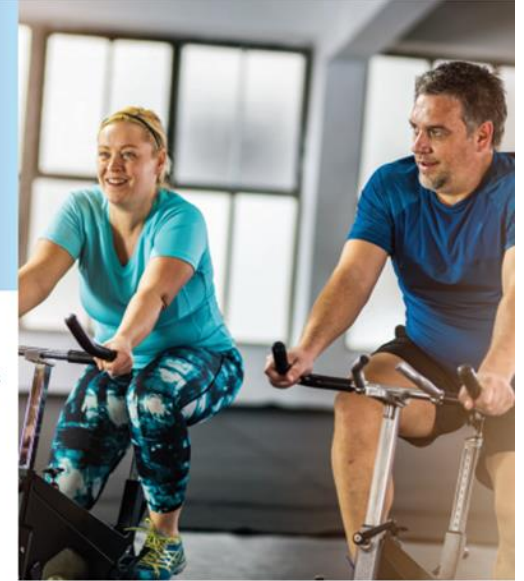
HOW?

Request a referral from your Prisma Health Provider

WHERE?

EIMG® is available at the following locations:

- Prisma Health Life Center (Downtown Greenville)
- Caine Halter Family YMCA (Downtown Greenville)
- Verdae YMCA (East Greenville)
- Eastside Family YMCA (Taylors)
- Prisma Health Family YMCA (Simpsonville)
- George I. Thiesen Family YMCA (Travelers Rest)



COST?

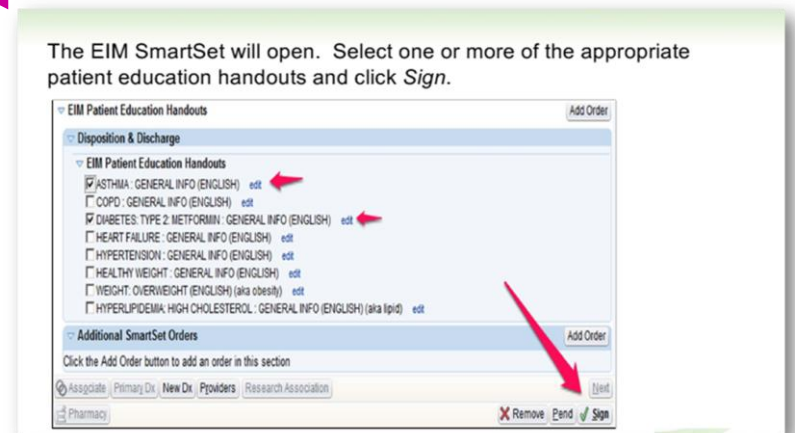
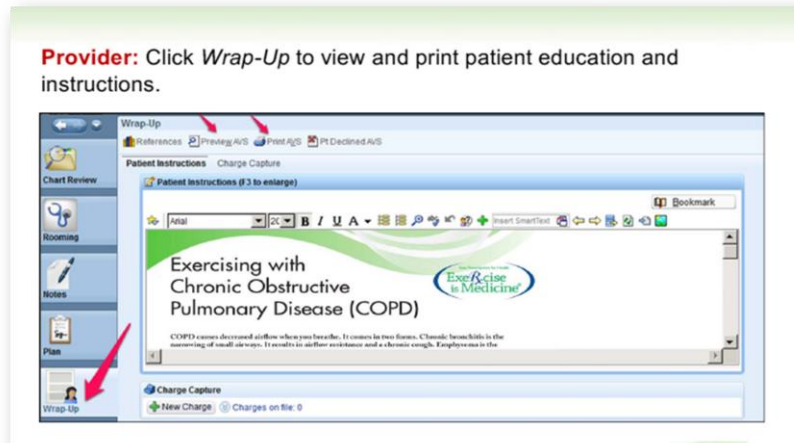
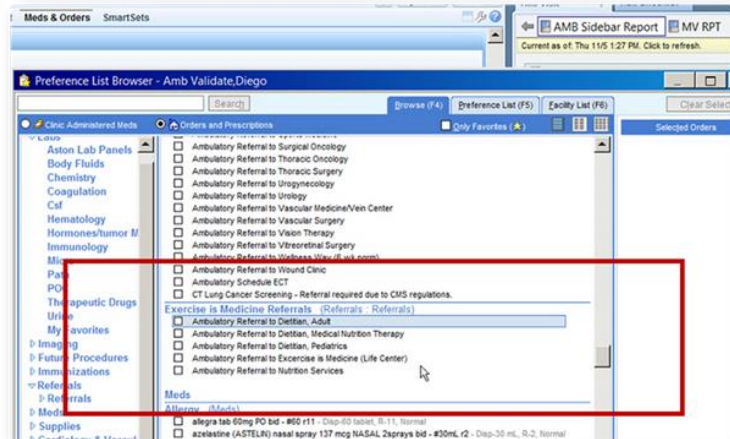
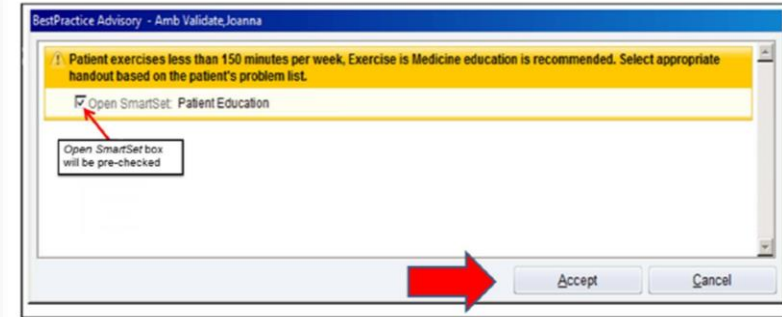
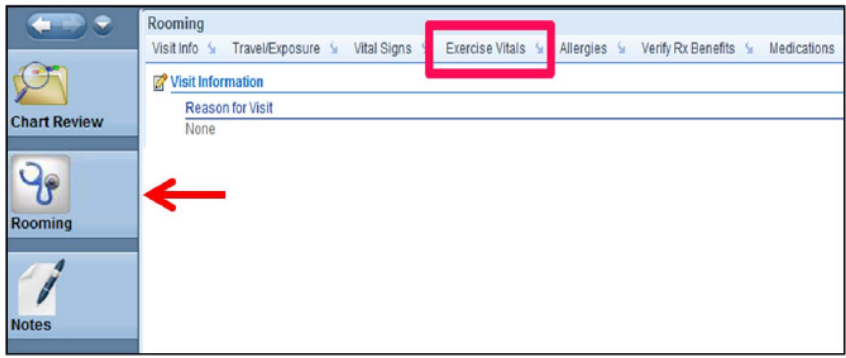
\$249 covers the full 12-week program, and includes an individual membership to the facility of choice

(Cost not covered by insurance. Financial assistance available based on income. Payment plan also available.)

"When I started the program I really thought there would be more people like myself that were overweight and feeling hopeless. However, I was pleasantly surprised. We had all types in our program, different ages and different body types and sizes. It was so diverse and I found it comforting to be part of a group of great people, all with their own reasons for being there. I discovered that exercising was more enjoyable with a group to talk to, work out with, and get to know."

- EIMG® Patient Graduate

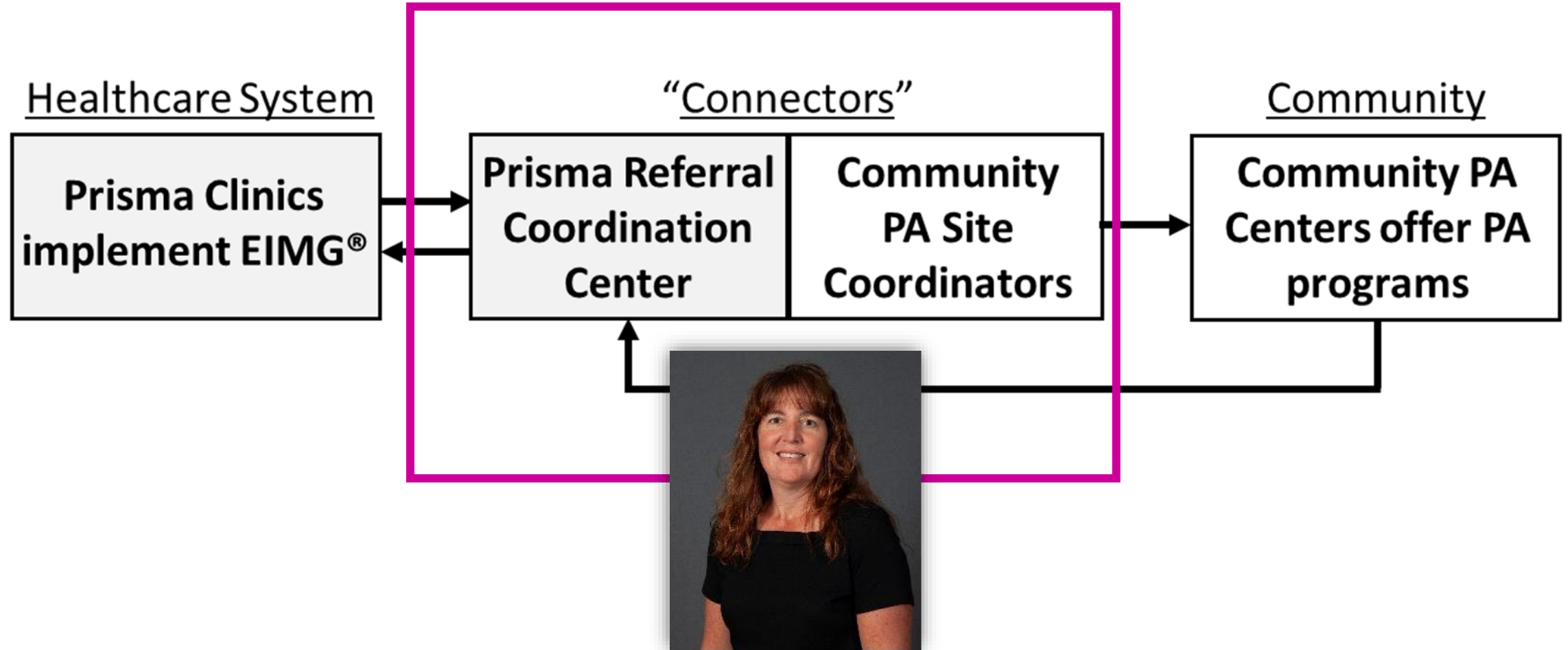
Electronic Health Record (EHR) Referral Programmed in EPIC



Placing a Referral to EIMG[®]

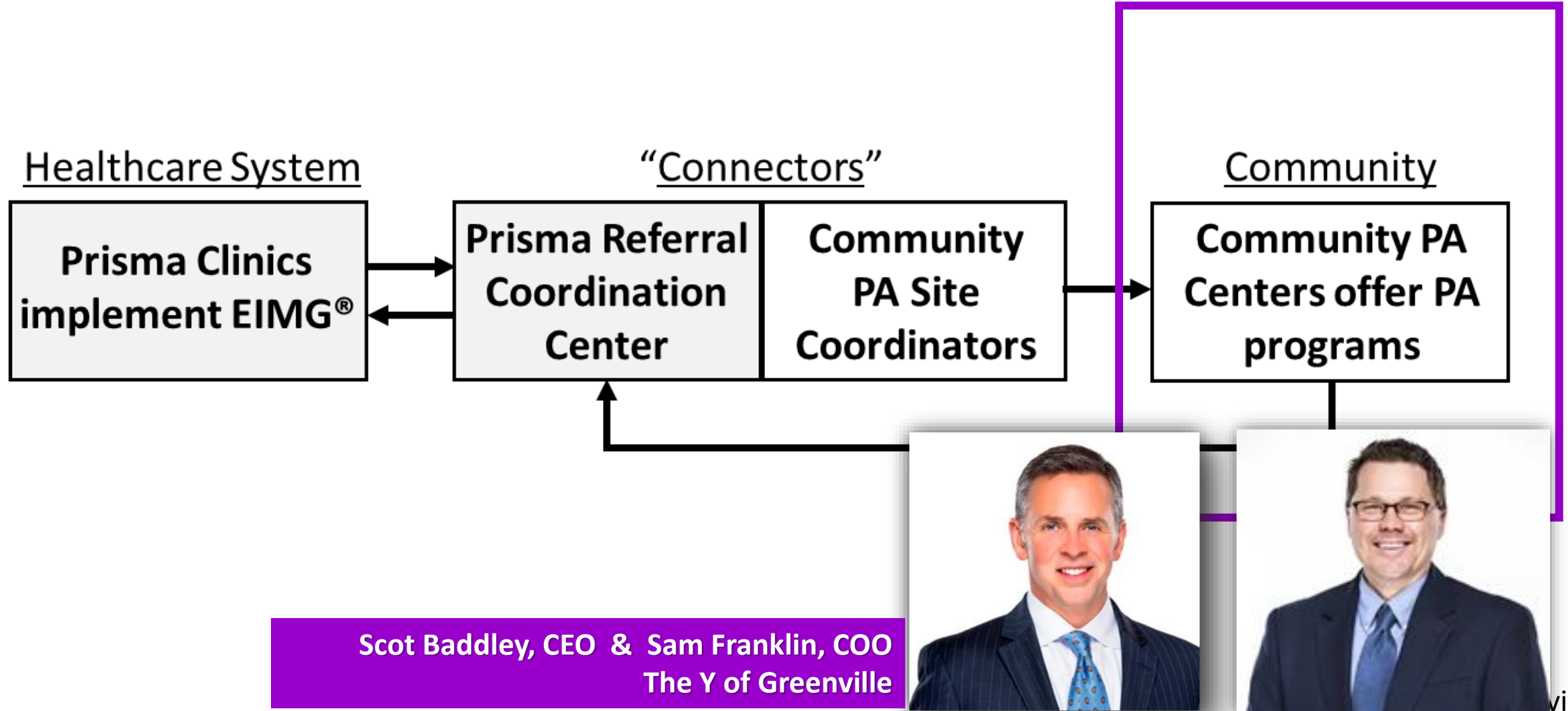
1. Obtain the Exercise Vital Sign (EVS)
2. Complete the Risk Severity Assessment
3. Obtain the Consent and Release of Information forms

Program Flow: "The Bridge"



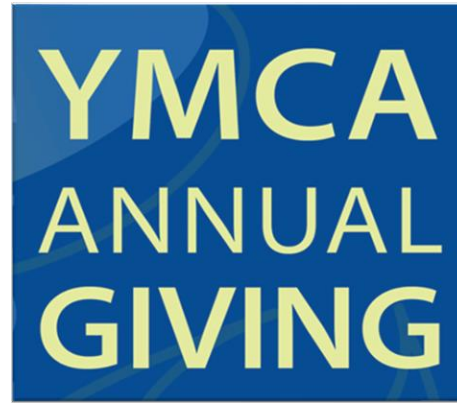
Stephanie Eskuri, RN, Care Coordinator

Program Flow





YMCA is a Strategic Partner



EIMG Financial Aid Report 2016-Present

Program cost:

\$249 for the 24 sessions and a membership for the duration of the program

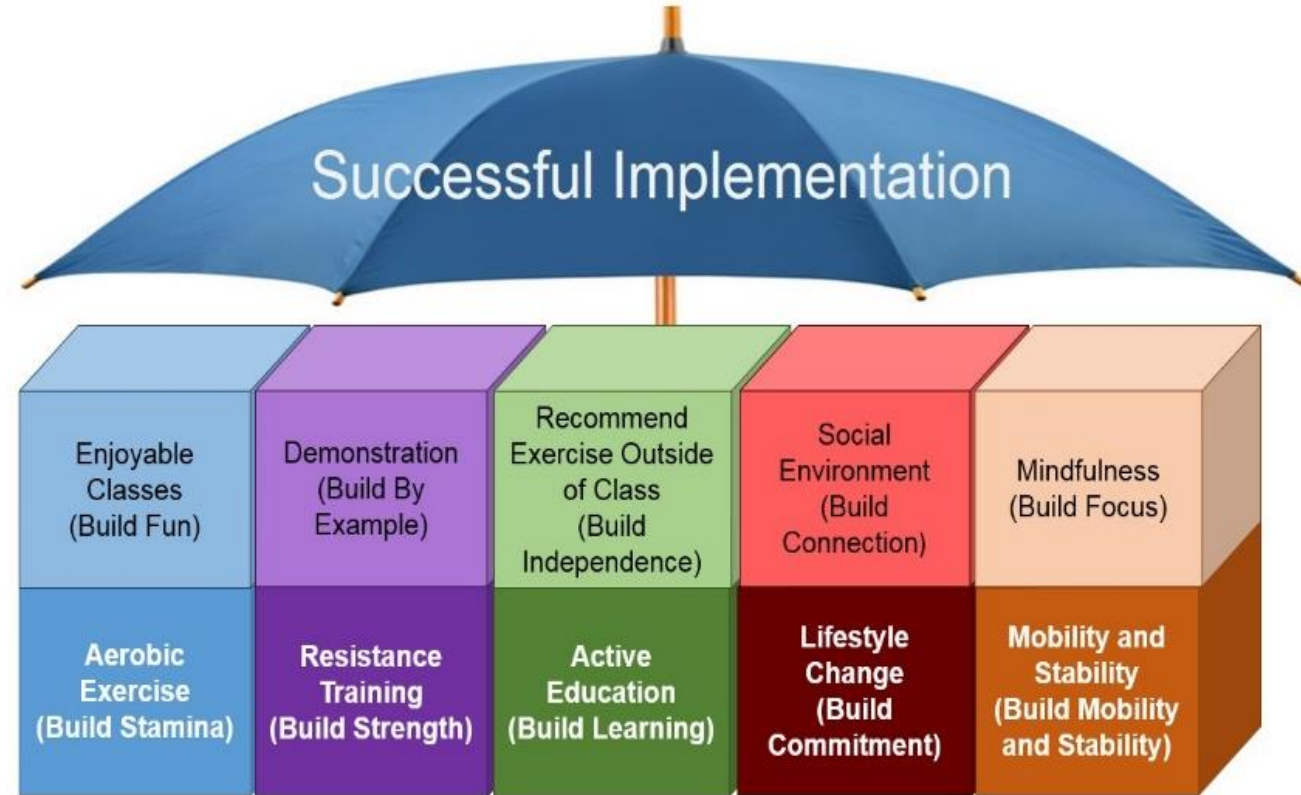
No one is turned away for an inability to pay

Over \$350,000 raised for the program

Year	Total Scholarship Provided	Total Non-Scholarship Revenue	% Scholarship of Total Rev
2016	\$1,537	\$796	66%
2017	\$3,686	\$1,791	67%
2018	\$7,983	\$5,771	58%
2019	\$10,240	\$21,648	32%
2020			
2021	\$6,723	\$8,611	44%
2022	\$3,657	\$6,705	35%
To: 10/13/23	\$6,338	\$7,719	45%

Year	Total Participants	Participants on FA	% of Total Participants on FA
2016	22	4	18%
2017	142	29	20%
2018	201	51	25%
2019	231	66	29%
2020			
2021	65	36	55%
2022	46	19	41%
To: 10/13/23	55	39	71%


Program Delivered by Highly Qualified Professionals



© EIM Greenville® All Rights Reserved.

- **12-weeks, 2x/week, 60-min sessions**
- **Behavior Change Focused to Increase Patient Self-Efficacy**
- **Flexible and Adaptable with Essential and Recommended Strategies to Reach Goals**

EIMG PA Program: “Move to Learn” patient education provided at every visit



Set Goals

Exercise is Medicine Greenville, SC
PATIENT INFORMATION PACKET

“What you get by achieving your goals is not as important as what you become by achieving your goals.” — Henry David Thoreau

When you begin to think about goals that you want to set for yourself, they should be something you truly want to accomplish and something you realistically can achieve. By using the S.M.A.R.T goals setting system, you will be able to create goals that are **Specific, Measurable, Achievable, Realistic and Timely.**

Create S.M.A.R.T. Goals:

- S**pecific Am I clear about what I want to achieve?
- M**easurable How will I measure my progress?
- A**chievable What is necessary for me to achieve my goal?
- R**ealistic Does my goal require me to work hard enough?
- T**imely When do I want to achieve my goal?


Example: I want to run a 5K with a time goal of under 40 minutes by using the Couch to 5K training plan.

My S.M.A.R.T. Goal:

Sources:
Holmes T. How to Set S.M.A.R.T. Goals. Active.com Website. <https://www.active.com/fitness/articles/how-to-set-sm-a-r-t-goals>. Accessed April 9, 2019.
Ergonomics Plus, Inc. How to Set SMART Health & Fitness Goals. <https://ergo-plus.com/wp-content/uploads/Setting-SMART-Health-and-Fitness-Goals.pdf>. Accessed April 9, 2019.

Program Providers:
PRISMA HEALTH, TRICK OF GREENVILLE, School of Medicine Greenville

Week	#	Topic
1	1	Planning for Success
	2	Identify Barriers
2	3	Set Goals
	4	Water Works Wonders
3	5	Exercise & Weight Loss
	6	Flexibility
4	7	Stress Management
	8	Stick To Your Plan
5	9	Snacking
	10	Don't Go It Alone
6	11	Intensity Intelligence
	12	Aerobic and Strength Training
7	13	METS vs WATTS
	14	Map Your Success
8	15	Feeling Great!
	16	Get More From Less
9	17	The Truth About Carbs
	18	Fast Facts for Fats
10	19	Build On Proteins
	20	Packing Healthy Lunches
11	21	SMART Goals
	22	See the Finish Line!



Stress Management

Exercise is Medicine Greenville, SC
PATIENT INFORMATION PACKET

Stress is something we all face—and must learn to manage—every day. Too much stress can have a negative effect, causing your body to suffer from both physical and mental “wear and tear.”

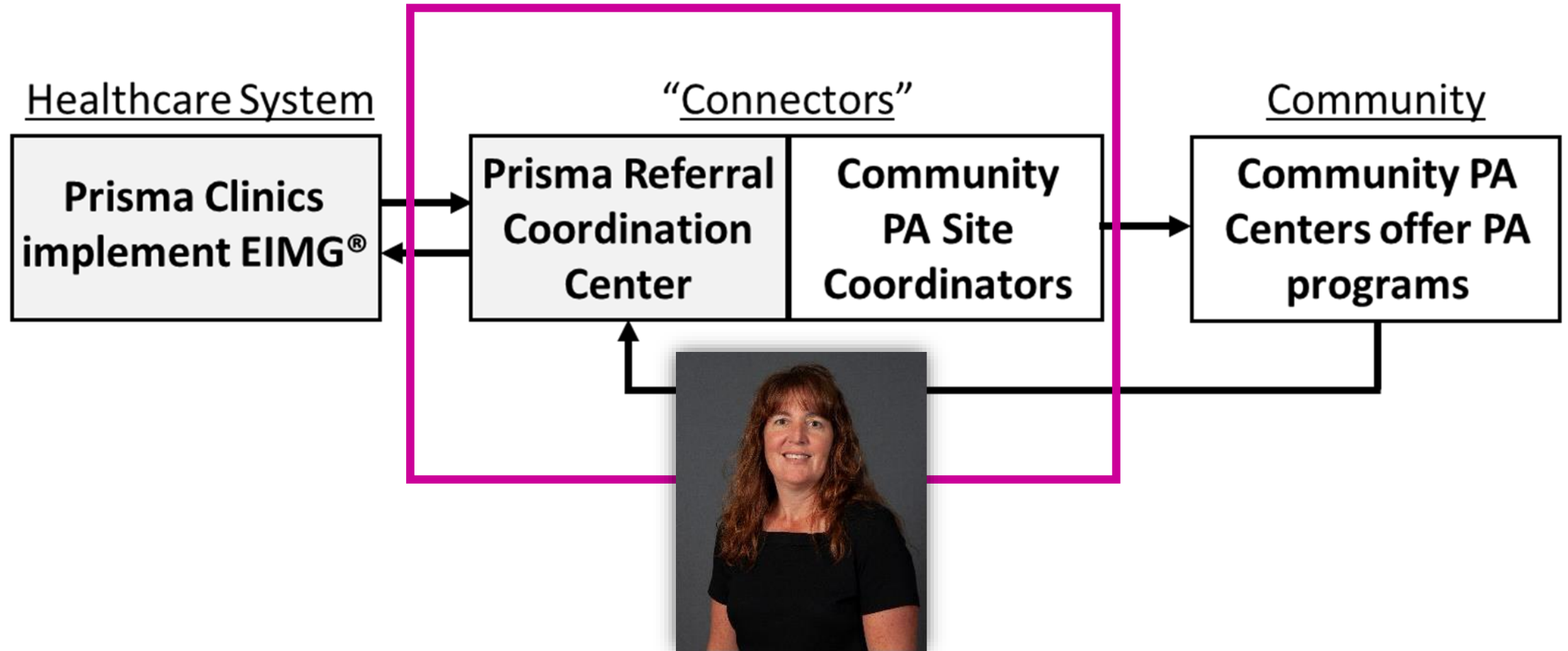
To help manage and keep stress at an optimal level consider these positive healthy habits:

- **Exercise:** Daily physical activity can help relieve mental and physical tension (consider a meditative practice such as yoga or Pilates classes)
- **Stretch and relax:** Stretching can help you relax through release of physical tension
- **Breathe deeply:** Set aside 5 minutes to focus on your breathing, clear your mind, and center yourself
- **Sleep:** Getting enough high-quality sleep can recharge and relax your body (7-9 hours recommended for adults)
- **Laugh:** Laughter can help relieve emotional, mental and physical tension
- **Get organized:** Create a “to-do” list to help focus on important tasks and prioritize items
- **Chat:** Talking with close friends and family can be helpful as a reassuring voice can help put everything into perspective

Sources:
Bushman BA. Flexibility Exercises and Performance. ACSM's Health & Fitness Journal. 2016; 20(5): 5-9. doi: 10.1249/FIT.0000000000000226
American Heart Association. Fight Stress with Healthy Habits Infographic. <https://www.heart.org/en/healthy-living/healthy-lifestyle/stress-management/fight-stress-with-healthy-habits-infographic>. Accessed April 9, 2019.
American Heart Association. 3 Tips to Manage Stress. <https://www.heart.org/en/healthy-living/healthy-lifestyle/stress-management/3-tips-to-manage-stress>. Updated June 2014. Accessed April 9, 2019.
National Sleep Foundation. National Sleep Foundation Recommends New Sleep Times. <https://www.sleepfoundation.org/press-release/national-sleep-foundation-recommends-new-sleep-times>. Updated February 2015. Accessed May 14, 2019.

Program Providers:
PRISMA HEALTH, TRICK OF GREENVILLE, School of Medicine Greenville

Program Flow: "Closing the Loop"



Stephanie Eskuri, RN, Care Coordinator

2022 data:

- 210 patients completed the program (>60% graduation rate)
- Patients with hypertension receiving usual care, referred by their HCP:
 - ↓Body weight ($p = 0.001$)
 - ↓Systolic & Diastolic BP ($p < 0.001$)
- Graduating patients highly satisfied w/ program & personnel: >4 on a 5-point Likert scale
- ***As of October 2023, EIMG has expanded to 39 clinics with > 600 patients onboarded***
- ***Pilot for Prisma Health Team members N=200***
- ***Duke Endowment and NIH R56***



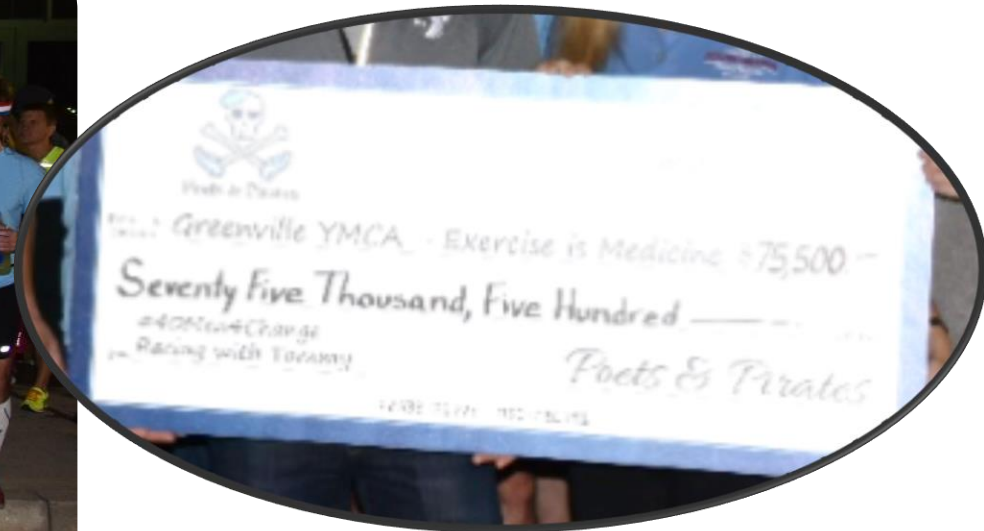


Testimonials

- *“Excellent program/awesome team here; I felt they cared about my progress and kept me engaged on meeting goals.”*
- *“This was encouraging and helpful in the social aspect of my life.”*
- *“This program is remarkable! I have never felt so welcomed. I enjoy the comradery with other participants & would recommend this program & instructor to anyone!”*

Buy-In: Hospital System and Community

- Continually contacted by national health care systems, eager to know process of implementing EIMG® into their systems
- EIMG® is recognized system-wide and throughout our community; enormous community support





- **UNIVERSITY OF SOUTH CAROLINA SCHOOL OF MEDICINE GREENVILLE:** The University of South Carolina School of Medicine Greenville will make a \$4.8 million in-kind donation to help implement its open-source Lifestyle Medicine curriculum in all interested medical schools. It will also provide guidance to the National Board of Medical Examiners, the primary organization assessing competency of medical providers, on adding questions and content related to lifestyle medicine. Finally, the school will provide 637 health systems and 755 YMCA associations with consulting and free access to its *Exercise is Medicine Greenville* toolkit, a comprehensive, 12-week program for using exercise to mitigate risk for chronic diet-related diseases.



[FACT SHEET: The Biden-Harris Administration Announces More Than \\$8 Billion in New Commitments as Part of Call to Action for White House Conference on Hunger, Nutrition, and Health](#)



Thank You!

Jennifer L. Trilk, PhD, FACSM, DipACLM

Trilk@greenvillemed.sc.edu

www.EIMGreenville.org

