Exercise is Medicine: A Global Health Initiative
If exercise could be packed in a pill, it would be the single most widely prescribed and beneficial medicine in the nation.

*Robert N. Butler, M.D.*

*Former Director, National Institute on Aging*
“In view of the prevalence, global reach and health effect of physical inactivity, the issue should be appropriately described as pandemic, with far-reaching health, economic, environmental and social consequences.”
Global Epidemic of Inactivity

Figure 6: Deaths attributed to 19 leading risk factors, by country income level, 2004.

The 15 leading causes of death in 2013 were:

1. Heart Disease
2. Malignant neoplasms (cancer)
3. Chronic lower respiratory diseases
4. Cerebrovascular diseases (stroke)
5. Accidents (unintentional injuries)
6. Alzheimer’s disease
7. Diabetes
8. Nephritis, nephrotic syndrome and nephrosis (kidney disease)
9. Influenza and pneumonia
10. Intentional self-harm (suicide)
11. Septicemia
12. Chronic liver disease and cirrhosis
13. Essential hypertension and hypertensive renal disease
14. Parkinson’s disease
15. Pneumonitis due to solids and liquids

Physical INACTIVITY related diseases
Cardiorespiratory Fitness & Mortality

All-Cause Death Rates by CRF Categories – 3,120 Women and 10,224 Men

Cardiorespiratory Fitness Level

Age adj death rate/10,000 PY

Low  Moderate  High

Women  Men

Blair SN. JAMA 1989
Effect of CRF on Mortality

Attributable Fractions (%) for All-Cause Deaths

40,842 men & 12,943 women from the Aerobic Cooper Longitudinal Study

Exercise is a Medicine
Physicians should prescribe it, Patients should take it!

• Instead of an allergy, exercise may be the long sought vaccine to prevent chronic disease and extend life

Are we reaching a point where NOT prescribing physical activity should be consider patient neglect?
Do You Really Think We have a Chance Without Exercise?

- Obesity
- Coronary artery disease
- Diabetes
- Hypertension
- Cancer
- Depression and anxiety
- Arthritis
- Osteoporosis
- Etc, etc, etc…

NO!

Patients
Physicians
We have to get people moving

Regularly Active
Out of the chair & off the couch
Engaged in an Active, Healthy Lifestyle
What if there was one prescription that could prevent and treat dozens of diseases, such as diabetes, hypertension and obesity…

Would you prescribe it to your patients?

Certainly!

- Robert E. Sallis, M.D., FACSM, EIM Global Center Chairman
Exercise is Medicine® is a global initiative to establish physical activity as a standard in healthcare.

EIM’s Goal is **Transformational Change**

- To **institutionalize** physical activity *assessment* & *prescription* into Global Healthcare Systems
The Exercise is Medicine® Solution

Three basic modules are necessary to establish physical activity as a standard in healthcare.
Health Care Providers adopt the EIM Solution by integrating and implementing the clinician module (steps 1-3).
1. Physical Activity Assessment
Clinicians and their healthcare team assess physical activity levels during every patient visits.

2. Physical Activity Prescription
Utilization of simple, fast, and effective tools for prescribing physical activity in the right “dose” for the prevention, treatment and management of chronic medical conditions.

3. Referral to a Physical Activity Network
Providing a list of programs, places, and professionals that offer the patient a selection of options that meet their individual needs and personal preferences to fill their physical activity prescription.
Physical activity can be quickly and efficiently assessed in the clinic setting through the use of the Physical Activity Vital Sign (PAVS).

The PAVS is a simple 2 item questionnaire that can determine weekly minutes of moderate intensity physical activity. Healthcare teams can then assess whether patients are meeting national physical activity recommendations and adjust their treatment accordingly. The PAVS is most effective when embedded as a “vital sign” in the electronic medical record (EMR).
2. Physical Activity Prescription

Healthcare professionals provide their patients with a prescription as a first step in promoting physical activity to their patient.

- Using the results from the PAVS, healthcare providers can provide the patient with an appropriate physical activity prescription.
- Physical activity prescriptions are based on both identified health risks and American College of Sports Medicine (ACSM) evidence-based guidelines.
- Prescriptions can be provided to each patient through the use of EIM prescription pads or web-based tools.
- Prescriptions can then be filled through referral to existing community resources.
Exercising to Lose Weight

The number of overweight and obese adults has seen a big increase over the past 50 years. Average American adults gain about two pounds per year. Increased weight means a larger number of people with Type 2 diabetes, heart disease, high blood pressure, and stroke. Evidence also links obesity with some cancers.

- Take all medicines prescribed by your doctor.
- Your body weight changes based on energy you consume and energy you spend. You consume energy as calories when you eat. You spend energy throughout the day during rest and activity.
- For the greatest success, make changes to what you eat, too. Stick to a healthy, calorie-controlled diet.
- Set realistic weight-loss goals. Aim to lose no more than one to two pounds per week.
- Start by exercising on your own. Begin walking or another form of activity that you can integrate into your daily routine.
- Invite others to join you. Exercising together is more fun and increases the chance you will continue. Dogs also make great walking partners!
- Look for programs available in your community. Consider contacting an appropriately credentialed exercise professional to help you. All you really need, though, is a good pair of shoes to get started walking.
- Use a pedometer or other activity tracker to monitor your progress. Slowly work toward a goal, like maybe 10,000 steps per day.

Aerobic Exercise Programs

The American College of Sports Medicine offers these guidelines for losing weight (Pescatello et al., 2013).

- Aim to drop at least five to 10 percent of your initial body weight over a three- to six-month period.
- Make changes to both eating and exercise. Maintaining these changes will create long-term weight loss.
- Try to reduce your calorie intake by 500 to 1,000 per day.
- Begin a steady increase to at least 150 minutes per week of moderate-intensity physical activity overall for health benefits.
- Consider higher amounts of exercise (300 minutes or more per week) to promote long-term weight control.

The key to losing weight is to add up the amount of exercise you do each day. The energy used to walk a certain distance is the same whether you walk fast or slow. Walking fast means you burn more calories per minute but walk fewer minutes. In the end, you burn the same calories if you walk the same distance at different speeds.

Getting Started

- Talk with your doctor before you start an exercise program. Ask about any changes to your medications or any concerns in becoming more active.

Regular physical activity plus a balanced diet can help you lose weight and keep it off. Exercise burns calories and reduces body fat. It also lowers your risk of developing the health problems listed above. The most important thing, no matter your weight or weight loss, regular exercise will improve your health.

How much exercise do you need? The most health benefit comes when inactive people become moderately active. Making exercise a regular part of your life can have a major impact on your health. The key is to choose activities you enjoy. Then, you will want to continue until you meet your weight-loss goals.

Evidence suggests both aerobic and muscle-strengthening exercise programs help. So try to do both. If you are just starting out, do more aerobic exercise. Over time, add resistance workouts. Doing both types will bring even more benefits for your weight loss and overall health and fitness.
3. Physical Activity Referral

Healthcare teams refer their patients to existing resources to support their efforts to become more active.

- Healthcare providers help their patients fill their exercise prescription by referring them to existing community resources.
- This may include directing patients to self-managed physical activity programs that can be performed independently.
- Other patients may need more structured programs that meet their individual health risks, abilities, and environmental needs.
- Existing community resources, such as certified programs, conducted at recognized places, hosted by credentialed professionals, may better engage patients in lifestyle modification strategies.
Referrals to qualified PA programs delivered by credentialed EIM Professionals at EIM recognized places.
Clinic - END GOAL

No patient should leave a physician’s practice without:

An assessment of their current physical activity levels

- and -

A physical activity prescription and referral to qualified resources for further counseling.
Existing **Community Resources** are utilized to support patients in increasing their physical activity levels (step 4).
Community Resources

4. Establishing a Physical Activity Referral Network

Providing patients with convenient, local access to credentialed EIM Professionals, EIM qualified PA Programs and EIM recognized Places

• Utilizing existing community resources to create a physical activity referral network to serve at-risk community population groups including those who suffer from obesity, sedentary lifestyles, and may have chronic diseases and conditions.

• Training professionals in the community and developing specialized programs to provide assistance for referred patient.

• Serving as a trusted referral source to which healthcare providers can send their at-risk patients.
PA Intervention Advisors

• The role of the PA Intervention Advisor is to serve as a link – a middle person - between the healthcare team and the existing community resources

• Some systems may not have or use PA intervention advisors, but these professionals can serve as key “links” encouraging patients to follow through on their “prescription”

• PA intervention advisors may also be particularly useful in engaging hard-to-reach, at-risk patients and empowering them to be more physically active
Credentialed EIM Professionals

- Certification of exercise and fitness professionals who are trained to work with at-risk populations
- Trained to deliver multi-faceted physical activity programs that include structured physical activity, as well as lifestyle modification strategies
- May also support self-management programs
- Credentialed to work with either low, moderate, or high risk patients to meet the high standards required by healthcare providers and payers
Qualified PA Intervention Programs

Structured PA, health education and lifestyle change strategies designed that:

- Prevent and manage non-communicable chronic diseases
- Combat obesity and sedentary lifestyles
- Extend therapeutic and rehabilitative care
Recognized EIM Places

Safe and convenient locations in the community for at-risk population groups to participate in PA programs

- Municipal Community Centers
- Park & Recreational Facilities
- Hospital Wellness Centers
- Medical Fitness Facilities
- YMCA Facility Locations
- Physical Therapy Clinics
- Commercial Health Clubs
- School System Facilities
- Corporate Health Centers
- Other Appropriate Spaces
EIM Solution = Building a Bridge of Trust between Healthcare Stakeholders and Community Resources
Active Health Outcomes uses the power of technology for tracking participation, conducting assessments and reporting (step 5)
EIM Solution: Utilizing Technology
Armed with leading edge technology, EIM Professionals effectively deliver PA programs, promote and track participation, conduct assessments and report measurable individual and aggregate outcomes.
Active Health Outcomes

Usable, clear, easy-to-read graphs and charts showing outcome analytics that link back to the health care provider enable educated decisions concerning participation in physical activity programs.
Usable, clear, easy-to-read graphs and charts showing outcome analytics that link back to the health care provider enable educated decisions concerning participation in PA programs.

1. Enrollment
2. Prescription
3. Referral
4. Delivery
5. Participation
6. Assessments
7. Collection
8. Outcomes

Active Health IT Platform (engagement to outcomes)
Healthcare Payers reimburse eligible patients, employees & beneficiaries to participate in the EIM Network.

EIM impacts Public Health by assisting the underserved to participate in the EIM Network.

The EIM Solution: A Comprehensive Model

- Intervention Advisors/Navigators assist patients with:
  - Enrollment
  - Assess Readiness
  - EIM Prescription
  - EIM Referral

- Qualified PA Intervention Programs delivered at recognized Places by credentialed EIM Professionals

EIM Network
Shared by Providers, Payers and Public Health to provide a critical mass of community participation in PA programs

Active Health IT Platform (engagement to outcomes)
The EIM Solution begins with the engagement of Healthcare Providers and Payers sending at-risk Populations to an EIM Network for participation in culturally-adapted, specialized physical activity intervention programs.