

“Exercise is Medicine” in Latin America: training health care professionals in physical activity prescription

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Abstract

Health care professionals (HCPs) play an important role promoting healthy habits to patients, yet they lack knowledge, training and self-efficacy to effectively prescribe physical activity (PA).

In 2011, the “Exercise is Medicine” Latin American Regional Center developed a one-day (8 hours) in-person course on PA and exercise prescription for HCPs, with theoretical and practical components. Contents include evidence-based health benefits of PA, screening for major risk factors, key behavioral change strategies, basic exercise testing, and prescription and referrals principles.

Participants take a multiple-choice evaluation before and after the training. Those who score 80% or higher in the final evaluation receive an international certification endorsed by the American College of Sports Medicine. Since 2013, they also report current PA habits and counselling in clinical practice at the beginning of the course. Sustainability of this initiative, including free enrollment of participants, has been achieved with the support from the industry, scientific societies, and sports and exercise authorities.

As of October 2013, 40 courses have been carried out in 15 cities and 7 countries of the region. A total of 1206 HCP have participated (26.4% general practitioners, 47.8% specialists, 20% other HCP), and 625 physicians have been certificated. Participants scored, on average, 20% higher in the final versus the initial evaluation.

In total, 379 participants completed the questionnaire, 61.2% of which reported to currently comply with international PA level recommendations. Also, 52.2% and 57.5% reported to always assess or recommend PA in their clinical practice. The overall quality of the course was scored 4.5 out of 5. Participants have shared personal testimonies, stating the positive impact of the training experience on their own personal exercise habits and clinical practice.

This course is a promising strategy to help incorporate PA promotion in health care settings. Evaluation of its medium and long-term impact is in progress.

Keywords: Physical activity, healthcare, counselling, chronic disease, prevention, Latin America

Zusammenfassung

Ärzte und andere Fachpersonen der Gesundheitsversorgung spielen eine wichtige Rolle, wenn es darum geht, gesundes Verhalten der Patienten zu fördern. Oft fehlen ihnen aber Wissen, Training und Selbstvertrauen, um wirksam Bewegung zu «verschreiben».

Das «Exercise is Medicine» Latin American Regional Center entwickelte 2011 einen eintägigen Kurs zur Verschreibung von Bewegung. Die theoretischen und praktischen Kursteile beinhalten die Gesundheitsnutzen von Bewegung, Screening für Risikofaktoren, Strategien zur Verhaltensänderung, Belastungstests und die Prinzipien von Verschreibung von Bewegung respektive weiterer Überweisung der Patienten.

Die Kursteilnehmer füllen vor und nach der Ausbildung einen Test aus. Teilnehmer, die nach dem Kurs mindestens 80% der maximalen Punktzahl erreichen, erhalten das internationale Zertifikat des American College of Sports Medicine. Seit 2011 berichten die Teilnehmer am Anfang des Kurses auch über ihr eigenes Bewegungsverhalten und ihre Beratungspraxis. Das Kursangebot mit Gratisteilnahme konnte nachhaltig gesichert werden dank Unterstützung durch private und öffentliche Partner und wissenschaftliche Gesellschaften.

Bis Oktober 2013 wurden 40 Kurse in 15 Städten und 7 Ländern durchgeführt. 1206 Personen nahmen teil (26.4% Allgemeinpraktiker, 47.8% Spezialärzte, 20% andere Fachpersonen) und 625 Ärzte wurden zertifiziert. Die Teilnehmer erreichten nach dem Kurs 20% mehr Punkte als vor dem Kurs.

Insgesamt füllten 379 Personen den Fragebogen zum eigenen Verhalten aus. 61.2% erfüllten die Bewegungsempfehlungen. 52.2% und 57.5% gaben an, dass sie in der Praxis immer das Bewegungsverhalten erfragen beziehungsweise Bewegung empfehlen. Die Kursqualität wurde mit 4.5 von 5 Punkten beurteilt. Gemäss Rückmeldungen der Teilnehmer hatte der Kurs einen positiven Effekt auf ihr eigenes Verhalten und ihre Beratungspraxis.

Dieser Kurs ist ein vielversprechender Ansatz zur Integration der Bewegungsförderung in der Gesundheitsversorgung. Die Evaluation der mittel- und langfristigen Effekte ist in Arbeit.

Schlüsselwörter: Physical activity, healthcare, counselling, chronic disease, prevention, Latin America

Introduction

The prevalence of noncommunicable diseases (NCDs) has reached epidemic proportions and they are quickly becoming the 21st century’s main public health challenge for all nations (Blair 2009, Ezzati et al., 2013). The World Health Organization estimated that, in 2008, 36 million global deaths were due to NCDs and 80% of them occurred in low resources regions like Latin America. Low- and middle-income countries (LMICs) of Latin America are now facing the simultaneous burden of NCDs and the unsolved issues of infectious diseases, malnutrition and maternal and child health (WHO, 2011). Thus, the epidemic of NCDs in Latin America embraces different characteristics that require special actions (López-Jaramillo 2008).

Physical inactivity, together with smoking, unhealthy diets and harmful use of alcohol constitute the main shared risk factors for developing NCDs. Physical inactivity by itself is the fourth leading cause of global mortality, responsible for approximately 3.2 million deaths annually (Kohl 3rd et al., 2012, WHO 2011, Lee et al., 2012) and 43% of adults are already physically inactive in the Americas (Hallal et al., 2012). A multi-stakeholder approach with interventions at all levels of society and across different sectors is needed in order to maximize the health impact of physical activity (PA) (WHO 2009; Colbert et Jangi, 2013, WEF 2013).

Primary care constitutes a key setting for the promotion of PA for the prevention and treatment of diseases (Orrow et al., 2012, Lopez-Jaramillo et al., 2013, Naci et Ioannidis, 2013). Moreover, PA has the same or better effects in the treatment of NCDs than pharmacology therapy (Naci and Ioannidis, 2013). Health care professionals (HCPs) have the responsibility to counsel and support their patients to become physically active. Similarly, when having active lifestyles, HCPs become exemplary role models to the community and are likely to provide better and more motivating counselling (Lobelo et al, 2009, Matheson et al., 2011). However, HCPs lack the appropriate knowledge, skills and self-efficacy to effectively prescribe PA and exercise to patients (Duperly et al., 2008, Lianov et Johnson, 2010, Hébert et al., 2012, Greig et al., 2013).

The American College of Sports Medicine (ACSM) created the “Exercise is Medicine” (EIM) global initiative to position PA as a vital sign within clinical settings so that PA is assessed and prescribed to every patient, in every visit, at any time (Sallis 2009). The EIM Latin American regional center developed the Exercise Prescription course for HCPs to contribute to continuing medical education training in PA prescription. Other EIM activities performed in Latin America include actions with local governments, private industry, academia and media (EIM LATAM 2013). This report describes the development, implementation and initial impact of the one-day, in-person Exercise Prescription course for HCPs in Latin America.

Development of the Exercise Prescription course for HCPs in Latin America

One of the main focuses of the EIM Latin American regional center has been the development and implementation of educational strategies in the region. The one-day (8 hours), in-person Exercise Prescription course has been the strategy most implemented and accepted within the region. The course contents are based on EIM-ACSM manuals and

materials that include PA international guidelines and recommendations.

The course has two components, one theoretical and one practical, each of approximately 4 hours of duration. The theoretical component consists of three main lectures:

- 1) Health benefits and risks associated with PA: it summarizes the available and updated evidence about the health benefits and risks of regular PA practice in the general population and in people with specific conditions or diseases.
- 2) Screening and risk stratification: it addresses the different methods of cardiovascular risk assessment before exercise prescription, including clinical- and health-related physical fitness testing. Additionally, key strategies for effective counselling, behavioural change and motivation mobilization are highlighted.
- 3) General principles of exercise prescription: it addresses the key principles of exercise prescription including recommendations on different types of exercises and adequate techniques.

The practical component allows participants to consolidate their knowledge and apply all the theoretical principles. Throughout this section participants get in couples and play the roles of patient and counsellor. They learn and practice how to perform a general fitness assessment, which includes measuring blood pressure, resting heart rate, blood glucose and anthropometric indicators (e.g. weight, height, fat percentage and abdominal perimeter); cardiorespiratory fitness level is assessed through the Six-Minute Walk test; strength is measured with abdominals and push-ups tests; finally, flexibility is measured by a modified version of the well-known sit and reach test. At the end of this section, participants complete a cardiovascular risk assessment and PA prescription of their working partner.

Participants are evaluated before and after the course with a 20-questions multiple-choice exam on basic PA topics. Those who score 80% or higher in the exam after the course, receive an International Certification in Exercise Prescription endorsed by the ACSM. Even though the course was initially designed exclusively for physicians, participation of other HCPs (e.g. physical therapist, physical educators, and nutritionists) has been allowed but without the possibility of receiving the international certification.

Additionally, since 2013 participants fill out a brief survey at the beginning of the course about their current PA personal habits (i.e. short version of the International Physical Activity Questionnaire) and clinical practice (i.e. 5-point Likert scale about how frequently they assess and prescribe PA to their patients). Participants are also asked to anonymously report their satisfaction with the course, more specifically on the content of the lectures, the applicability and utility of theoretical and practical components, and general logistics.

Sustainability of the Exercise Prescription course, as well as other EIM activities in the Latin American region, has been achieved with the support from the private industry, alliances with scientific societies, governmental entities, and sports and exercise authorities. This joint effort has allowed the free enrolment of participants to the courses.

Results of the Exercise Prescription course for HCPs in Latin America

As of October 2013, a total of 40 courses have been delivered in 7 countries and 1206 HCPs have been trained (*table 1*).

Table 1: Number of courses and participants per country

Country	Number of Courses	Participants from each country	
		Number	Percentage
Argentina	1	26	2.2%
Chile	4	42	3.5%
Colombia	21	624	51.7%
Mexico	6	192	15.9%
Paraguay	2	97	8.0%
Uruguay	2	61	5.1%
Venezuela	4	164	13.6%
Total	40	1206	

Among participants, 26.4% were general practitioners, 47.8% were specialists and 20% were other HCPs. The main medical specialties represented were internal medicine, cardiology, family medicine, and sports medicine (table 2).

Participants scored, on average, 20% higher in the final versus the initial exam. From the 894 physicians that attended the course, 625 received the international certification. On the other hand, 379 participants completed the survey about current PA personal habits and clinical practice. Surprisingly, 61.2% of them reported to currently engage in 150 minutes or more of moderate to vigorous PA during the week. Similarly, 52.2% and 57.5% reported to always assess or recommend PA in their clinical practice.

The overall course was qualified on average with 4.78 out of 5 points. All specific components of the course were scored above 4.5 out of 5 points (Table 3). Participants have shared personal testimonies, stating the positive impact of the training experience on their own personal exercise habits and clinical practice.

Discussion

The Latin American community is in need of HCPs who can effectively deliver PA and exercise prescription to their patients. The Exercise Prescription course developed by the EIM Latin American regional center has been a well-accepted and highly rated initiative by hundreds of HCPs in Latin America. The strong theoretical basis added to the highly practical components of the course, all adapted to the specific necessities of HCPs, accounts for much of its success until now. The successful implementation of this strategy keeps motivating other countries and sectors to adopt it and fund it, respectively.

Table 3: Participants' qualification of the course components

Course component	Qualification *
Overall course	4.5
Overall lectures	4.8
Lecture 1	4.8
Lecture 2	4.8
Lecture 3	4.8
Exercise prescription activity	4.7
Concordance between the theoretical and practical components	4.7
Pertinence and applicability of the course in their clinical practice	4.9
Usefulness of hand-out materials	4.8
Accomplishment of program and scheduled activities	4.7
Organization and logistics	4.8

* Maximum score was 5 points

Table 2: Profession of course participants n=1206

Health care professionals (HCPs)	Participation (%)*
Medical HCPs	
General practitioners	26.4%
Internal medicine	10.0%
Cardiology	4.6%
Family medicine	4.6%
Sports medicine	4.4%
Others	24.3%
Other HCPs	
Physical education	5.6%
Nutrition	4.2%
Physical therapy	3.8%
Others	6.3%

* Missing data corresponds to 5.8% of total participants

The results of the course are satisfactory, with an average improvement of 20% in PA and exercise prescription knowledge. At this point it is important to remark that most attending participants join voluntarily and have a higher interest in PA compared to other peers. This could explain the unexpectedly high levels of PA among participants, and the high percentage reporting to have assessed and prescribed PA before attending the course.

Nonetheless, as the initiative continues to grow, expectations are set to reach a larger group of HCPs in the region so that a network of PA counsellors is built to facilitate referrals within primary care settings.

Conclusions and further steps

The Exercise Prescription course is a promising strategy to help incorporating PA promotion in the health care settings of Latin America, enhancing the adoption of an active lifestyle by the general population. The evaluation of the course medium and long-term impact is in progress. Likewise, the EIM regional center is developing versions of the course for other specific HCPs beside physicians.

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