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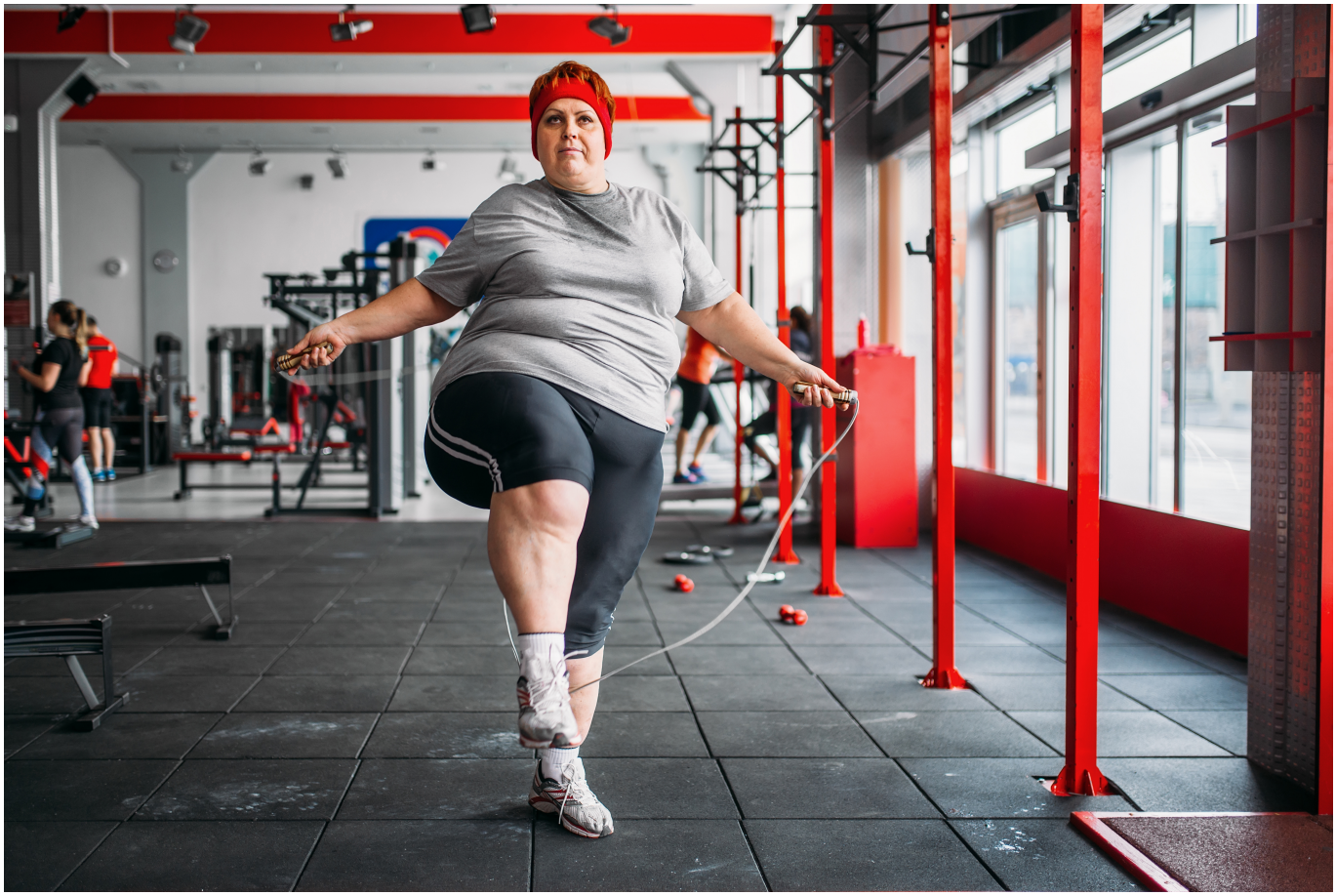
REVIEW

Physical Activity Is an Opportunity for the Health of Nations: What Should We Do Next?

EXERCISE IS MEDICINE / SPORTS AND SOCIETY



Bewegung ist eine Chance für die Gesundheit der Nationen: Was sollen wir als nächstes tun?

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Abstract

Physical activity provides huge opportunities for the health of nations. Understanding this, the World Health Organization has published a Global Action Plan which aims to provide member states with a framework for action, namely to create active societies, people, environments and systems. The target is set at a 15% reduction in physical inactivity levels by 2030. We explore in this paper some of the challenges and opportunities that come with it, and give the practitioner some real-world opportunities for relevant action at the local level, as well as for their patients, staying true to the Physician's Pledge (Declaration of Geneva): "I will attend to my own health, well-being, and abilities in order to provide care of the highest standard."

Résumé

L'activité physique constitue une opportunité pour la santé des nations. L'Organisation Mondiale de la Santé vient de publier le Plan d'Action Global visant à donner aux Etats membres un cadre de référence pour agir, créer des sociétés, des assemblements de personnes, des environnements et des systèmes actifs. La cible est une réduction de l'inactivité de 15% pour 2030. Nous en présentons les défis et les chances, tout en donnant au praticien quelques pistes réelles pour développer des actions locales, et aussi pour leurs patients. Le tout en gardant à l'esprit le Serment du Médecin de la Déclaration de Genève: «Je veillerai à ma propre santé, à mon bien-être et au maintien de ma formation afin de prodiguer des soins irréprochables.»

Zusammenfassung

Körperliche Aktivität bietet grosse Chancen für die nationale Gesundheit. In diesem Sinn hat die Weltgesundheitsorganisation einen globalen Aktionsplan veröffentlicht, der den Mitgliedstaaten einen Handlungsrahmen bieten soll, aktive Gesellschaften, Menschen, Umwelt und Systeme zu schaffen. Das Ziel ist eine Reduzierung der körperlichen Inaktivität um 15% bis 2030. Wir untersuchen einige der damit verbundenen Herausforderungen und Möglichkeiten und machen dem Praktiker einige Vorschläge für relevantes Handeln auf lokaler Ebene sowie für seine Patienten, indem wir dem Versprechen des Arztes treu bleiben: «Ich werde mich um meine eigene Gesundheit, mein Wohlbefinden und meine Fähigkeiten kümmern, um eine Versorgung auf höchstem Niveau zu gewährleisten.»

Schlüsselwörter: Gesundheit, Bewegung, körperliche Aktivität, Führung, Weltgesundheitsorganisation

Introduction

In 1953, Jeremy Morris published a study [1] which compared the occurrence of adverse cardiac events in the London double-decker buses employees. The classic duo transporting Londoners was composed of a sedentary driver and an active conductor, the latter going to

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and through and up and down the alleys and stairways. Hopefully by now, we all know the story and its results: the active employees had lower rates of cardiac events, significantly and largely lower rates. Multiple epidemiological studies, and then randomized trials, have over the years added to the uncontroversial literature on the health benefits of an active lifestyle [2–4]. Ultimately, for those interested in exploring this literature, Pedersen and the late Bengt Saltin published in 2015 a review of the evidence for exercise prescription in 26 different chronic conditions [5].

Mirroring this rise in the evidence in favour of physical activity (PA) is the decline in the actual quantity of PA exerted by people throughout the world [6]. This decline between 1965 and 2010 amounted to an abyssal 50% and counting. Not only are people moving less, they are also increasingly spending time sitting. Although the two might seem completely interdependent, there is a growing interest in the notion of sedentariness [7], exemplified by the long sitting hours of students and employees alike in our modern-day work environments, or the increasing TV and screen viewing times. Research is showing that high levels of PA cannot offset the deleterious effects of prolonged sitting time, and that it is thus paramount to introduce breaks in this sedentary “activity” at regular intervals [8].

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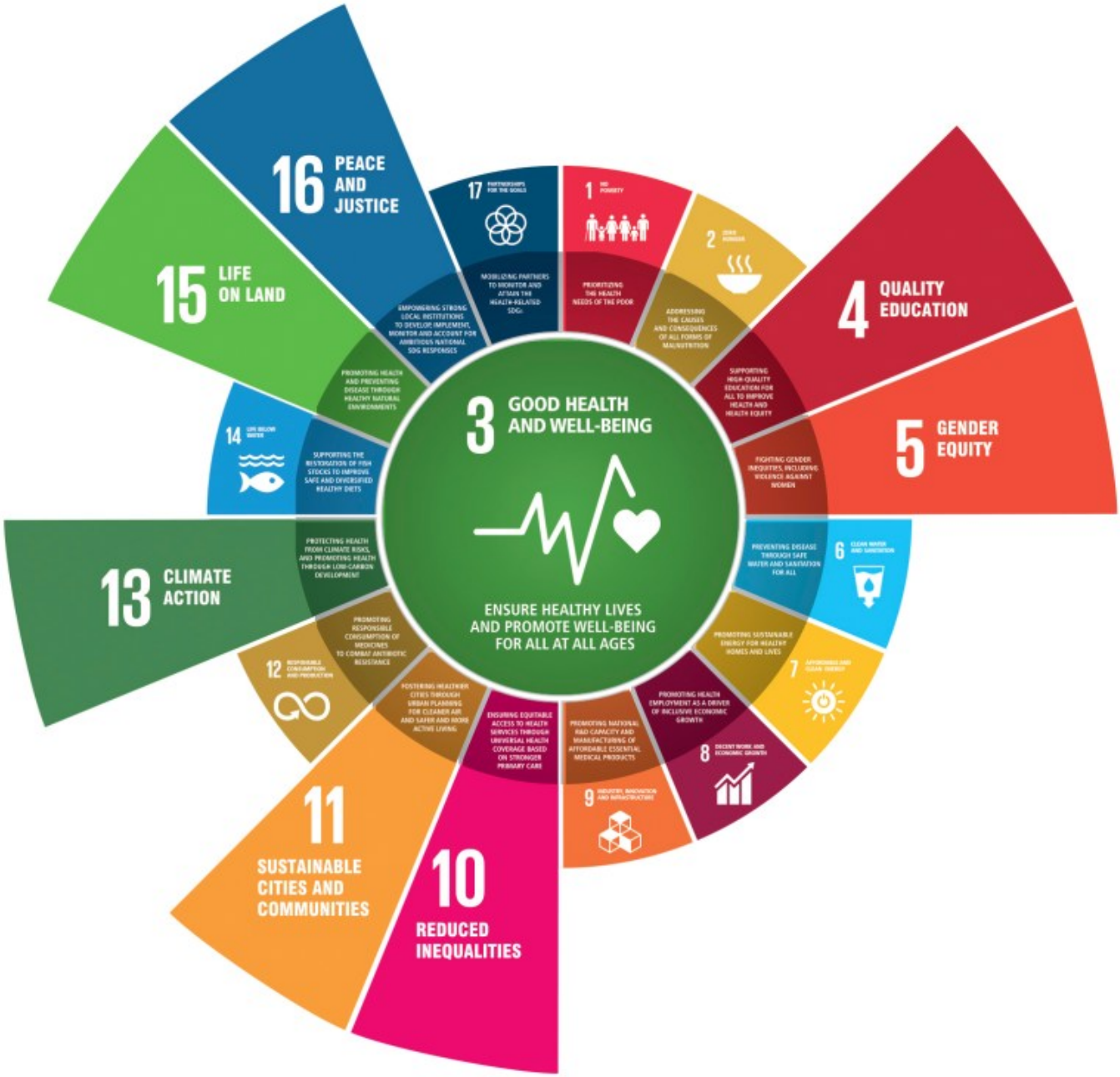

Fig. 1: Physical activity can contribute directly to eight Sustainable Development Goals (SDG 3 Health and wellbeing, SDG 4 Quality education, SDG 5 Gender equity, SDG 10 Reduced inequalities, SDG 11 Sustainable cities and communities, SDG 13 Climate action, SDG 15 Life on land, SDG 16 Peace and justice) according to the Bangkok Declaration on Physical Activity for Global Health and Sustainable Development [16].

We all understand the multifactorial nature of these trends and realize the difficulties related to behavioural and systemic change, but the current healthcare situation, namely the constant progression of non-communicable diseases (NCDs), and the associated uncontrolled rising costs, call for action from all stakeholders. In this article, I would like to present the latest developments from the World Health Organization (WHO), all the while commanding the

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authors for their insights into a complex global challenge. Finally, I would like to add a few comments on opportunities that lie in front of us healthcare practitioners, for the benefit of our patients.

Physical activity, exercise or sports

Before we delve into the latest recommendations for action, it is important to understand some of the main differences between these concepts [9]. Physical activity encompasses “any bodily movement produced by skeletal muscles that results in energy expenditure” and is associated with physical fitness [10]. It spans across multiple domains: occupation, transportation, leisure and domestic. In other words, one does not need to do sports to be sufficiently active. On the other hand, exercise corresponds to “planned, structured and repetitive bodily movements, the objective of which are to improve or maintain physical fitness” [10]. Finally, sports is defined as a subset of exercise and requires rules and/or goals.
All of the above have been correlated to improvement in or higher cardiorespiratory fitness in countless studies [11], and it is also well established that a low fitness level is a strong predictor of mortality and premature morbidity [12].

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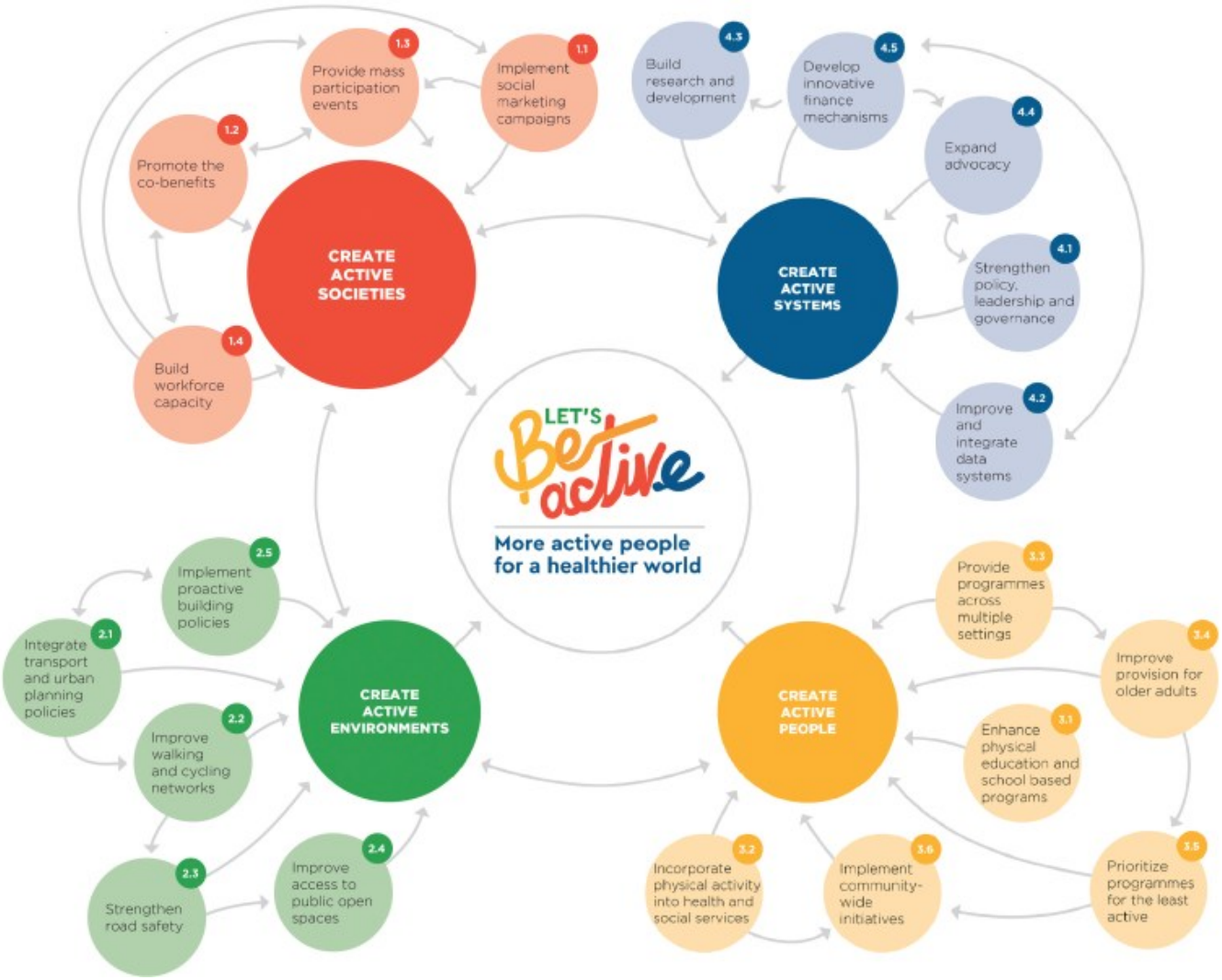

Fig. 2: The WHO Global Action Plan systems-based roadmap depicts the 4 objectives and 20 policy actions that are universally applicable and address the multiple determinants of physical inactivity.

ISPAH and WHO have a plan

In 2015, at the 70th session of the United Nations General Assembly, all countries committed to investing in health in the resolution "Transforming our world, the 2030 Agenda for sustainable development". The Agenda 2030 is a framework for action and a set of specific policy actions and led in 2016 to the definition of the 17 Sustainable Development Goals (SDGs) [13]. Building on the previous global action plan on the prevention on NCDs and the agreed nine global voluntary targets (which include a 10% reduction in the prevalence of insufficient PA by 2025) [14], PA became one of the focus points. It is important to recognize the important role played by a group of professionals working for the International Society for Physical Activity and Health (ISPAH, http://www.ispah.org), who has been leading the push for inclusion of PA in the discussion on sustainable development [15]. At the 6th ISPAH conference in Bangkok in 2016, the Declaration of Bangkok [16] directly linked PA to 9 SDGs (figure 1) and paved the way for the development of WHO's Global Action Plan on Physical Activity 2018–2030, which was

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released this year [17]. This document presents a mandate with the need for "a whole-of-society paradigm shift in respect to both supporting and valuing all people being regularly active".
WHO's Action Plan had recalibrated the PA goals to a 15% relative reduction in physical inactivity by 2030. It presents four strategic objectives (create active societies, systems, environments and people) and twenty policy actions applicable universally, which are presented in figure 2.

The importance of partnerships
A global action cannot be undertaken within the scope of any single agency and therefore demands partnerships. These include various ministries (health, transport, education, sports, environment, tourism and finance, amongst others), development agencies (international, regional), nongovernmental organizations, philanthropic foundations, academic institutions, industry leaders and the private sector, cities and local governments, communities and professional associations. Of the latter, medical and allied health play a major role, we will get to this later. The main challenges lie in the necessary efforts to coordinate any action across the various stakeholders.

Create active societies
The emphasis is put on social norms and attitudes, with the pledge to create a paradigm shift towards the understanding and appreciation for the multiple benefits of regular PA. The 4 main actions are: 1. Communication campaigns using social marketing theory. 2. Promotion of the collateral benefits for the environment, the economy and society. 3. Facilitate and promote mass participation events that engage communities in movement. 4. Empower trained professionals in their activity-promoting roles.

Create active environments
Spaces and places should provide opportunities for safe movement for all according to their abilities. The 5 main actions are: 1. Integrate urban and transport planning to prioritize mixed-land use, to develop connected neighbourhoods and the use of public transport. 2. Improve and protect walkability and "wheel-ability" of the streets. 3. Strengthen road safety by all means to protect the most vulnerable users. 4. Facilitate access to public and green spaces, to recreational and sporting facilities. 5. Develop policies and guidelines to promote active workplaces, schools and infrastructure design in general.

Create active people
People should have access to programmes and opportunities for PA across multiple settings. The 6 main actions are:
1. Good quality physical education in schools to develop a movement culture that is based on sound health and physical literacy. 2. Ensure adequate training of healthcare and social care professionals on counselling in PA. 3. Provide programmes across all sectors and places, to

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reach people of all communities and abilities. 4–5. Develop specific programmes for older adults and the least active communities, especially women and adolescent girls. 6. Aim for community-wide engagement by all stakeholders to promote ownership at the grassroots level.

Create active systems
There is a crying need for strong leadership and governance at multiple levels, albeit in alignment with the health and PA goals. In addition, new tools for information systems are necessary to coordinate, share and monitor actions. The 4 main actions are: 1. Strengthen coherence across sectors through guidelines at national level. 2. Promote data systems to monitor PA levels and inform policy and practice. 3. Promote research in the field. 4. Understand the importance of advocacy at all levels of decision-making. 5. Strengthen financing mechanisms for implementation of policies.
The Global Action Plan emphasizes the need for “upstream” actions aimed at infrastructure, social, cultural and economic factors (policy), as well as “downstream” actions that are centered on the individual. Actions can also be undertaken locally to lead the way and build momentum toward a national impact. The successful implementation should integrate seven key areas, and healthcare practitioners can, in my opinion, be proactive in many different ways.

The seven key areas for action by clinicians

The scope of actions required to impact population-level PA seems way beyond the reach of isolated clinicians. As much as this is obvious, it is also worthwhile to underline that no impactful action will happen without the participation and full commitment of healthcare systems in the fight against NCDs, and this includes PA promotion by clinicians. Medical doctors’ opinions are still highly regarded in civil society, in the media and by their patients. It is our duty and oath to do everything we can to promote a healthy society and an efficient medical system. Table 1 highlights the seven areas and opportunities that are within reach of clinicians.
Of course many of these actions require commitment, time allocation, energy and above all a passionate approach to health advocacy. But all it takes is that all of us bring a small piece to the puzzle. Part of it comes through the understanding of what advice can help a person engage in a physical activity more regularly, and there are positive signs that primary care doctors can easily do that [18] and there is a manual which has been developed in Switzerland as part of the PAPRICA program (PA promotion in primary care) [19]. Have you ever thought of taking your patient out of the office for a walk? In 1988, an editorial in JAMA addressed this exact question [20]. You’d be surprised how much you could learn about their fitness levels, and their needs by doing a simple thing like that. Plus, you would benefit from it yourself, nothing like an active meeting.

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Key area	Setting and context	Actions
1. Leadership	Your clinic, hospital, practice	Commute actively Promote active breaks for yourself and employees Motivate colleagues to join you on active breaks
	Your family	Be active, promote multiple outdoor activities, choose wisely
	Your sporting environments	Make it about more about health, less about competition
	Education	You know something they don't: accept speaking engagements and share your passion for movement and health
	New technologies	Engage in wearable and mobile health technology, your patients ask for it, this is an opportunity to help and guide them
2. Policy & governance	Local, regional or national professional organizations (e.g. Swiss Sports Medicine Society)	Be active in organizations and promote projects that address PA and NCDs
	Sporting and not-for-profit associations	Promote health and fun first, active events, inclusion of all abilities, equal opportunities
3. Coordination	Allied health professionals	Develop your network of professionals who can assist in helping people move and use referral schemes Develop communication principles and ask for feedback
	Fitness & gym groups	Create partnerships with indoor exercise facilities
4. Resource mobilization	Physiotherapy	Prescribe MTT (Medizinische Trainingstherapie) to activate your patients that need it
	Sports and recreational associations	Develop the network and know what each one is doing to refer your patients adequately
	Outdoor active environments	Know the spaces and places available, use google maps to analyze patients' neighbourhoods and search for active opportunities
	Adapted PA specialists and coaches	Know the network, connect with coaches who have a Msc in adapted PA and refer patients
5. Community engagement	Your community	Be active in your community to support or promote active events
	Lead the way	Walk the talk: be active yourself and let it be seen
	Schools	If your kids go, support active events, participate and offer to help with new projects
	Politics	Interact with local council, or better yet, get involved and keep your active health agenda as a priority
6. Promotion & advocacy	Media	Your voice counts, embrace opportunities to address larger audiences and spread valuable health and activity messages
	Medical and general press	Write to share your knowledge and commitments to fight NCDs and get people active
	Social media	Use new communication technologies to have a voice and create discussions
	Everywhere	Lead the way, never use escalators or elevators when the choice is there
7. Evidence-based practice	Benefits of PA	Know your science and share it with your patients
	Monitor PA	Ask your patients about their PA levels, record and track them
	Education	Educate yourself on exercise and training principles
"Never believe that a few caring people can't change the world. For, indeed, that's all who ever have" – Margaret Meade		

Table 1: Seven key areas for action towards reaching WHO PA goals: what can clinicians do?

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The challenges medicine poses to lifestyle change

At the heart of the problem, we must recognize the role medicine has played in the difficult fight against NCDs. The medical field has brought tremendous advances in the understanding and treatment of ever more complex diseases, and this has been a major drive for the medical industry as well. New diseases equal new medication needs and opportunities, according to the prevalent medical model. We always hear about our healthcare systems, and somehow few people seem to realize how much of a misnomer that it. Medicine revolves around disease, this is what drives it, and we should therefore make a distinction between the current acting model, let me call it "diseasecare", and the one embedded in "The Physican's Pledge", part of the 2017 revised Declaration of Geneva: "The health and well-being of my patient will be my first consideration" [21].

For the medical profession, the prescription pad is almost an extension of the hand at the end of a consultation, it is part of our practices and reflects the expectations we have generated in our patients. We have all studied the extensive pharmacopeia that parallels our diagnoses. Beyond our clinic, the industry is making sure that we know of the best current evidence on prescription drugs. But who makes sure that we are skilled to prescribe behaviour change for the major lifestyle factors linked to NCDs?

Education in the medical schools aims to teach students the essential skills and the basic facts to enable them to deliver the best possible care. For this, they must become confident, competent and capable to counsel on PA interventions. Swiss medical schools have very limited content pertaining to the benefits of PA and exercise for health, outside of some optional programmes. In the past years, the Swiss Sports Medicine Society (SGSM/SSMS) has approached Swiss universities to address this issue and offered assistance in the development of new content, with poor success. Other countries, like the UK, have been luckier in their progress, but we can see a general trend that leaves room for hope [22].

And last but not least, the rise of healthcare cost is a difficult topic to avoid. It would make sense to adopt cost-effective (in the long term) lifestyle changes over expensive specialized and drug-based therapies, think along the lines of cholesterol, overweight and obesity, diabetes, vascular disease, musculoskeletal underuse pain syndromes, etc. But unfortunately the incentives are weak and the competition is too strong. The WHO makes good points in the Global Action Plan, when stressing the necessity to raise the awareness on collateral benefits of higher PA levels. These are hard to measure, but their scale is much broader, at societal, cultural and environmental levels; global health, that is. We cannot afford to waste these important opportunities and we should all be actors in the fight against NCDs and the restoration of sustainable health.

A pledge for an active medical community

In the light of the recent political interventions, our profession is facing some new challenges in Switzerland. We have a duty of care and have pledged to prioritize the health and well-being of our patients. This role extends beyond our clinics and offices and includes our streets, our cities, our communities and our society. We move in a realm where our actions are being

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watched and judged, our words can have positive impacts and our behaviours can promote change in people's understanding and approach of their own health.
In 1948 the Declaration of Geneva listed the professional duties of the physician under the auspices of the World Medical Association as a contemporary successor of the Hippocratic Oath. In 2017, a peculiar new point was added: "I will attend to my own health, well-being, and abilities in order to provide care of the highest standard". Do yourself a favour, go for a walk with your patients.

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