World Physiotherapy
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The Role of Physiotherapy in the Prevention and Management of Non-Communicable Diseases (NCDs)

Executive Committee led Expert Group on NCDs

NOTED

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THE ROLE OF PHYSIOTHERAPY IN THE PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES (NCDs)

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The Europe Region of World Physiotherapy is a non-profit, non-governmental organisation that represents the interests of the physiotherapy profession in Europe. The Organisation has a membership of 38 Physiotherapy Associations representing around 200,000 physiotherapists in Europe. The purpose of the association is to lead, promote and represent the physiotherapy profession in the Europe Region by driving excellence in education, practice and research advocating and influencing health policy. (https://www.erwcpt.eu/about-us)

EXECUTIVE SUMMARY

Physiotherapists possess unique expertise in physical activity promotion and exercise prescription, making them invaluable assets in addressing the needs of individuals living with, or at risk of non-communicable diseases (NCDs). Despite their potential, physiotherapists remain an underutilised and underfunded resource in combating the NCD epidemic in Europe.

The purpose of this paper is to increase awareness of physiotherapists' considerable contribution to preventing and managing NCDs. It is to assist Member Organisations when meeting policy makers and politicians so that they consider the physiotherapist's role in their decision-making processes regarding NCDs prevention and management in Europe. The paper describes the unique role of physiotherapists in public health planning and promotion and details opportunities for physiotherapists' involvement in future public health initiatives aimed at NCD prevention and management.

Evidence supports the effectiveness of physiotherapy in NCD prevention and management, necessitating its inclusion in strategies developed by European and national health organisations to maximise the impact of physiotherapy in addressing NCDs. Exercise has been shown to be the most potent intervention to prevent and manage NCDs, improve quality of life, mitigate the effects of NCDs and lower mortality rates. It is increasingly recognised as of importance in the primary medical care of at least 35 chronic diseases.

Physiotherapy is the third largest health profession in Europe and the primary non-invasive (nonpharmacological and nonsurgical) health profession. As the experts in exercise prescription, physiotherapists specialise in conducting thorough assessments of individuals, suggesting exercise protocols that are safe and suitable for their specific needs, and imparting essential education on recognising warning signs. This makes them the most highly qualified professionals to prescribe and design exercise programmes tailored to address NCDs.

The Europe Region of World Physiotherapy supports the WHO's urgent call to address the NCD epidemic, and endorses its advocacy for a primary healthcare approach that focuses on early detection and cost-effective interventions to address the NCD challenges effectively.

The Europe Region of World Physiotherapy calls on the WHO and relevant stakeholders to recognise, support and promote the significant contribution physiotherapists make in tackling the growing challenge of NCDs across Europe. Physiotherapists should be integral to public health planning, promotion, and interventions, especially in initiatives aimed at NCD prevention and management. Policymakers should also include the vital role of physiotherapists in NCD strategies in Europe.

Physiotherapy's impact extends beyond improving individual health; it bolsters economic productivity across Europe. Delivered with professionalism and respect for human dignity, physiotherapy services are grounded in robust clinical reasoning and scientific evidence.

The takeaway is unequivocal: as experts in movement, physical activity, and exercise, physiotherapists are an indispensable resource in combating non-communicable diseases. Their role in this crucial fight must not be underestimated or overlooked.

1. INTRODUCTION

Physiotherapists are well positioned and qualified to have a pivotal role in meeting the needs of people living with or at risk of non-communicable diseases (NCDs), especially due to their unique expertise in the areas of physical activity promotion and exercise prescription. However, in Europe, they remain an underutilised and underfinanced human resource in addressing the NCD epidemic. The Europe Region of World Physiotherapy strongly advocates for the evolving role of the physiotherapist within the public health arena, especially in the prevention and management of chronic diseases.

The purpose of this paper is twofold; to increase awareness within the World Health Organization (WHO) of physiotherapists' considerable contribution to preventing and managing NCDs and to inform politicians and policy makers so that they consider the physiotherapist's role in their decision-making processes regarding NCDs prevention and management in Europe. To achieve this, the paper describes the unique role of physiotherapists in public health planning, promotion and implementation and details opportunities for physiotherapists' involvement in future public health initiatives aimed at NCD prevention and management. It does not provide an exhaustive review of physiotherapy in the prevention and management of NCDs in Europe.

2. NON-COMMUNICABLE DISEASES (NCDs)

Non-communicable diseases (NCDs), as defined by the United Nations and World Health Organization, are chronic conditions that do not spread from person to person , typically have a long disease duration with slow progression and are a result of a combination of genetic, physiological, environmental, and behavioural factors [1,2]. The main types of NCDs include cardiovascular disease, cancer, chronic respiratory disease, and diabetes, with degenerative neurological, musculoskeletal, and mental health disorders also included in this category [1,2]. The WHO recognises the critical importance of countering the emerging epidemic of NCDs with Sustainable Development Goal 3.4 committed to reducing premature mortality from NCDs by one-third by 2030 [3]. However, according to the 2030 Agenda for Sustainable Development adopted by the UN in 2015, only a slight reduction in NCD mortality was achieved by 2020 and efforts to tackle NCDs must be redoubled [2].

The burden of NCDs is significant in the EU, accounting for over 91% of deaths and 87% of disability-adjusted life years (DALYs) due to conditions like cardiovascular diseases and cancers [2]. The risk factors contributing to NCDs are multifaceted, encompassing modifiable behaviours such as tobacco use, alcohol consumption, poor diet, and physical inactivity. In Europe, it is estimated that 62% of deaths and 46% of DALYs are attributable to these modifiable behaviours. Physical inactivity alone is responsible for approximately 125,000 deaths and almost 2 million DALYs, with all physical inactivity related deaths and DALYs resulting from NCDs [4,5,6]. Additionally, metabolic risk factors like high blood pressure and obesity further exacerbate the situation. Obesity poses a serious contemporary challenge, with obesity rates in Europe continuing to increase; one in three school-aged children, one in four adolescents and almost 60% of the adult population in Europe now living with overweight or obesity [7].

Environmental and socioeconomic conditions also play a role; pollution and poverty increase vulnerability to NCDs. Poverty is closely linked with NCDs. Due to their lack of resources, vulnerable and socially disadvantaged people are likely to face higher rates of NCDs [8]. Existing health inequalities in access to health care and to medical resources are a double burden to poorer individuals [9].

Due to their long duration and slow progression, NCDs impose a high burden on health care systems, both financially and structurally. These diseases additionally undermine national economic development, resulting in production and productivity losses due to disability in daily work and life for European citizens. The financial burden of the four major NCDs in the EU (cardiovascular disease, cancer, type-2 diabetes, chronic respiratory disease) claim at least 25% of total health spending and create an economic loss of almost 2% of EU gross domestic product [8]. These chronic conditions and particularly multiple NCDs per patient, accrue a disproportionate burden to health systems [6,10,11].

3. HEALTH CARE SYSTEMS AND NCDs

Given the enormous socioeconomic burdens of NCDs, their prevention and management have become a priority for the WHO and health service delivery systems [12]. People living with NCDs are reliant on health systems to deliver a continuum of appropriate, affordable, accessible, and high-quality services for prevention, treatment, and rehabilitation throughout their lifetimes. Investing in better management of NCDs is critical. High impact essential NCD interventions can be delivered through a primary health care approach to strengthen early detection and timely treatment. Evidence shows such interventions are excellent economic investments because, if provided early to patients, they can reduce the need for more expensive treatment [1,2,12,13]. However, to date, healthcare systems have been criticised for relative inattention to the 'gap between knowledge translation and practice, as it relates to preventing and managing NCDs.

4. PHYSIOTHERAPY AND NCDs

Some healthcare professions including physiotherapy, have not yet been utilised to their full potential in addressing the NCD epidemic [14]. Physiotherapy is the third largest health profession in Europe. It is a statutory regulated, first contact profession and is the primary non-invasive (nonpharmacological and nonsurgical) health profession. Physiotherapy is the health profession leading and managing physical activity promotion and exercise prescription. Physiotherapists are concerned with identifying and maximising quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, and rehabilitation [15]. These spheres encompass physical, psychological, emotional, and social wellbeing.

As primary contact practitioners with excellent communication skills, physiotherapists are well placed to promote healthy lifestyles with targeted examination/assessment of every patient's and client's health and lifestyle behaviour and targeted interventions. They are educated to provide services in the health services delivery environment but also have the knowledge and skills to adapt health recommendations to the community environment taking into account the social and environmental determinants of health. Moreover, the profession of physiotherapy has the ability and responsibility to adapt to the changing needs of society, especially given that adults and even children often have one or more risk factors or manifestations of NCDs.

Early intervention is central to effective physiotherapy practice, focusing on primary prevention. Physiotherapists in primary care, who are often the first point of contact for patients, can address problems early and effectively through personalised coaching. By working together with patients, they develop strategies that maximise movement potential, manage pain, and enhance overall well-being. Furthermore, they have a practice pattern consistent with the needs of effective health education delivery and implementation (i.e., long visits over prolonged times of weeks or months to facilitate patient empowerment and in turn, effect long-term lifestyle behaviour change). Their practices are cost-effective compared with pharmacologic or surgical interventions for chronic NCDs. Exercise prescription, health education and empowering patients to improve their health are the established hallmarks of physiotherapy practice, and these evidence-based interventions are unequivocally effective in preventing, in some cases reversing, and in managing chronic NCDs [16,17,18,19,20,21].

In secondary prevention, access to pulmonary, cardiac, and cancer rehabilitation services offers comprehensive programmes of exercise, education, and peer support. This strong focus on secondary prevention is vital for maintaining function and independence, preventing patients from returning to more expensive parts of the health system (acute hospitals) [18,21]. Enabling people to remain well and at home reduces pressure on secondary care. Interventions such as physiotherapy led community rehabilitation, urgent community response, and virtual wards allow people to stay in their homes, recover more rapidly, and prevent the deleterious effects of hospital admission [15,18,19].

5. PHYSIOTHERAPY AND EXERCISE PRESCRIPTION FOR NCDs

Exercise has been shown to be one of the most powerful interventions to prevent and manage NCDs, improve quality of life, mitigate the effects of NCDs and lower mortality rates [18]. It is increasingly recognised as important in the primary medical care of at least 35 chronic diseases [19,20,21]. Exercise education and consultation are further relevant factors for patients with NCDs. The identification of patient intervention capacity and suitability can be achieved by considering the various contraindications and constraints, preferences, barriers and facilitators for exercise. The potential benefits relevant to them can be physiological, psychosocial or economic [19,20].

Exercise as a core component in the primary and secondary management of NCDs remains under-utilised, under prescribed and frequently overlooked, often in favour of pharmacologic or surgical interventions [18,22]. This is despite its unequivocal clinical and cost-effectiveness (€1120-€15860 per QALY gained), which is more cost-effective than many pharmaceutical interventions [23]. Currently, only one third of patients at risk of or living with NCDs receive physical activity counselling from their healthcare professionals and even fewer are provided with individualised exercise prescriptions [21,24]. Enhancing health care using exercise prescription is a low-risk, cost-effective approach to maximise health at population levels.

Physiotherapists are the exercise prescription experts to provide this as they specialise in conducting thorough assessments of individuals, suggesting exercise protocols that are safe and suitable for their specific needs, and imparting essential education on recognising warning signs [25,26]. This makes them the most highly qualified professionals to prescribe and design exercise programmes tailored to address NCDs.

6. PHYSIOTHERAPISTS' ROLE IN NCDs PREVENTION, MANAGEMENT AND ADVOCACY

The Europe Region of World Physiotherapy believes that physiotherapists are equipped through their education to meet the needs of people with or at risk of NCDs. Physiotherapists provide evidence-based interventions that can reduce the incidence of NCDs and associated disability and mortality.

Physiotherapists have a vital role in the **prevention** of NCDs in Europe by:

- Incorporating concepts of prevention, wellness, fitness and health promotion into every patient or client consultation.
- Integrating and interpreting elements of medical, biopsychosocial and health promotion models to facilitate health status monitoring over time.
- Recognising risk factors for, and the course of, chronic diseases and their potential impact on quality of life and on activities and participation.
- Using skills in behaviour change to promote healthy lifestyles in individuals and communities.
- Designing and developing screening programmes to prevent disease within a community-based integrated team focused on healthy lifestyles.
- Applying scientific principles of movement, function, and exercise progression to tailor interventions aimed at promoting physical activity and improving health outcomes.
- Adapting tasks and environments to promote healthy behaviours and improve health outcomes for individuals and populations of all ages, considering diverse needs within a community-based integration team.
- Adopting healthy lifestyle choices themselves that include engaging in active forms of transportation and meeting national guidelines for physical activity participation.

Physiotherapists have a vital role in the **management** of NCDs in Europe by:

- Utilising decision-making skills that encompass all dimensions outlined in the WHO's International Classification of Function (ICF) framework for measuring health and disability at both individual and population levels.
- Establishing and facilitating collaborative, interprofessional, patient- and client-centric relationships that empower individuals and populations in self-management across the lifespan and through the health continuum, with an emphasis on movement and function.
- Applying best available evidence in selecting, prescribing, and using intervention and measurement strategies to establish exercise prescription for individuals to help them prevent primary, secondary, and tertiary conditions or optimise functional mobility.
- Providing nonsurgical and nonpharmacological services as a physiotherapy hallmark.
- Establishing their role as 'train the trainer' for other professions working with exercise programmes to provide high quality services for all clients living with NCDs.

Physiotherapists have a vital role in actively **advocating** for the prevention and management of NCDs in Europe by:

- Communicating and collaborating with relevant health professionals to help individuals and populations receive appropriate health services.
- Supporting scientific, educational, legislative, and other policy initiatives that promote regular physical activity and exercise to enhance health and prevent disease.
- Advocating for community design that promotes opportunities for safe physical activity and active forms of transportation for individuals and populations of all ages and abilities.
- Advocating for strategies that reduce inequities related to social determinants of health.

The European Region of World Physiotherapy supports the WHO's

- emphasis on the urgency of addressing the NCD epidemic, and its aim to reduce premature mortality from these diseases by one-third by 2030; and
- commitment to re-orienting and strengthening health systems through people-centred primary health care (PHC) that focuses on early detection, universal health coverage (UHC), widespread implementation of very cost-effective interventions called 'NCD best buys' and training of the healthcare workforce to be 'NCD-ready'.

The Europe Region of World Physiotherapy calls on the WHO as well as EU and national health policy makers to recognise the role of the physiotherapist in NCDs and to ensure it is included in all related policy for the benefit of the population in both preventing and managing NCDs across Europe.

Physiotherapy does not just mean more healthy people, but more productive people who can contribute to the European economy. Physiotherapy services are provided in an atmosphere of trust and respect for human dignity and underpinned by sound clinical reasoning and scientific evidence. The message is unequivocal: as the health profession experts in movement, physical activity, and exercise and a resource in the battle against non-communicable disease, physiotherapists' role in the fight against NCDs should never be underestimated or overlooked.

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The purpose of launching the paper at the conference was to increase awareness within the World Health Organization (WHO) of physiotherapists' considerable contribution to preventing and managing NCDs so that it would include the physiotherapist's role in future statements and policies regarding NCDs prevention and management in Europe.

The presentation was delivered in a special session – *Harm Reduction – Exercise and Prevention – Physiotherapy.*

- The session was chaired by Dr Emil Told-Schedel with opening remarks by Dr. László Gellér, Professor of Cardiology at Semmelweis University, Budapest
- Dr. *Romeu Mendes*, Consultant, Special Initiative on NCDs and Innovation, WHO Regional Office for Europe spoke on '*Strengthening the prevention and control of NCDs through physiotherapy*
- The paper was introduced by Associate Professor Gráinne O'Donoghue, Ireland, Chair of the Europe Region Physiotherapy in NCDs' Working Group.
- The panel speakers were - Ms Gabriella Szendrö, Hungary - the effectiveness of physiotherapy in cardiac rehabilitation. Dr. Éva Máthéné Köteles, Hungary – the effectiveness of physiotherapy in diabetes, obesity and weight management; andProfessor Christina Bravo, Spain – the role of physiotherapy in Mental Health; and closing remarks – Esther-Mary D'Arcy, Chair of the Europe Region of World Physiotherapy.

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