



**Karolinska  
Institutet**



# PHYSICAL ACTIVITY IN NON-COMMUNICABLE DISEASE PREVENTION IN VIETNAM



## **PHYSICAL ACTIVITY IN NON-COMMUNICABLE DISEASE PREVENTION IN VIETNAM: CAPACITY BUILDING & KNOWLEDGE EXCHANGE FOR PRACTICAL USE IN THE SOCIETY AND HEALTH CARE SYSTEM**

### ***Project at a glance***

As a cooperation between Vietnamese and Swedish people and organizations, the project “Physical activity (PA) in non-communicable disease (NCDs) prevention in Vietnam” aims to make existing scientific evidence on PA interventions for NCDs available for practical use in the Vietnamese society and health care system. This is done by capacity-building and knowledge exchange in 1. an education and training program for doctor and health care practitioners and 2. an evaluation process investigating the effects on practitioner learning and usage as well as patient adherence to structured PA interventions. In this cooperation, Karolinska Institutet and Professional Associations for PA (an association within the Sports Medicine section of the Swedish Society of Medicine) are Swedish participants while the main collaborator in Vietnam is Hanoi Medical University.

There have been a number of researches on the positive effects of PA toward NCDs treatment. The reports of WHO indicates that NCDs currently impose a heavy burden on socio-economic development in low and middle income countries where heart disease, diabetes and stroke together are estimated to reduce GDP by 1-5% as people die prematurely. There is evidence that NCDs and their risk factors are also closely related to poverty at the household level. Recent reports show that heart disease and cancer greatly increase the likelihood of falling into poverty in developing country due to catastrophic out of pocket expenses and lost income from ill health.

As a matter of fact, factors strongly increasing NCDs burden include tobacco use, physical inactivity and high consumption of unhealthy foods. Obviously, NCDs are largely preventable. Therefore the project “Physical Activity in non – communicable disease prevention in Vietnam” addresses the rights perspective of all people regardless of socio – economic conditions to approach better health care services. Furthermore, physical activity in non – communicable disease prevention and treatment also helps individuals, their family and the entire community to combat poverty.

The present SIDA - funded project has been implemented since October 2010 and will continue in the following two years. Up to now, 2 training courses for Vietnamese health care practitioners and government officers have been organized in April and August 2011 in Sweden. The main purpose of the courses is to introduce physical activity in prevention and treatment of disease (PAPTD) as well as the barriers, the lessons learnt and recommendations on how to overcome difficulties, how to implement effectively and how to advocate policy changes on this issue. In November 2011, two courses will be held with for peer doctors and primary health care workers in Hanoi and Phu Tho. Lectures and experience sharings will be delivered by experts from Karolinska Institutet and Hanoi Medical University.

### ***Expected outcomes***

- o The Swedish book “PA in the prevention and treatment of disease” for professionals will be translated and published in Vietnamese language. In addition, the book for patients will be widely exposed at the same time. The selected chapters for translation will be based on disease burden patterns in Vietnam.
- o An information portal updating PA and NCDs progress for Vietnamese. PAPTD is one of the most important component in this website.
- o Comprehensive curriculum and training material on PAPTD for health care providers in HMU.
- o Training PA on Prescription for peer lecturers in order to expand this program in health care system and entire community.
- o Training for primary health care workers and patients in Vietnam.

In addition, the further goal of the project is to pave a foundation for capacity supporting future development of this program in Vietnam; advocate PA on prescription oin curriculum at HMU; set up the fitness center for patients to have PA as prescribed under the instructions of professional and trained health care workers.

The project is funded by SIDA (Swedish International Development Cooperation Agency) and implemented by The Swedish Medical University Karolinska Instiutet and Hanoi Medical University.

Karolinska Institutet is one of the world's leading medical universities. Its mission is to contribute to the improvement of human health through research and education. Karolinska Institutet accounts for over 40 per cent of the medical academic research conducted in Sweden, and offers the country's broadest range of education in medicine and health sciences. Since 1901 the Nobel Assembly at Karolinska Institutet selects the Nobel laureates in Physiology or Medicine. For more information visit [www.ki.se](http://www.ki.se),

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## Physical activity improving human life

### ***What's Physical activity?***

Physical activity (PA) is defined as any body movement that works your muscles and uses more energy than usual. PA does not only empower health but also prevent diseases. PA is marked as one of the most effective solution benefiting human health. If everyone follows the advice of applying PA in daily life, the health of entire population will be significantly improved and the health care cost will be reduced.

There is sufficient evidence to show strong positive effect of PA for NCDs prevention and treatment, e.g. diabetes, heart disease, colon cancer and stress... Physical inactivity lifestyle creating the serious burden for society is negatively impacting to the economy, increasing the health care services cost and decreasing the productivity. The report from EUPhix indicated that the physical inactivity cost 150-300 euro for each citizen every year. Health care expenditure for American physical inactivity was estimated 75 billions USD in the year 2000.

### ***Physical Activity is medicine***

PA can be prescribed as a method in prevention and treatment of disease. PAP was first applied by Swiss doctors as a central effort in the promotion of PA in the population and each individual level. Under this method, each patient or group of patient deliver the individualized PA on prescription for their treatment period. The obvious interest of PA on prescription is to make the patient feel active and positive during treating process, that urges them taking responsibility for their own health. Recently, PAP has been widespread all over the development countries. In the year 2009, the Swedish doctors and primary health care workers are allowed officially to prescribe PA for their patient in all provinces. PA was also highlighted in preventing and decreasing the symptom of diabetes, obesity, metabolic syndrome, heart disease, osteoporosis and stress. There are many sufficient evidences detected that only 10 minutes of exercising per day can reduce the risk of breast cancer, colon cancer...

In the world where physical inactivity recognized as a key determinant of mental, social and environment health, the prescription of PA has become more important in changing human's lifestyle toward a better positive way. Besides, PA was proved to have the strong positive effects in NCDs treatment. For people with diabetes, obesity, heart disease, hypertension... once adherence to the structured PA intervention, the PA prescription can help them to stay healthy without using any additional medication. PA on prescription is widespread used in Sweden. With the message "Physical activity is medicine", instead of paying for medicine bills, patients in Swedish hospitals and primary health care centre get the individualize PA prescription then go the fitness to do their own exercise under the instruction of trained and professional staffs. Patients are instructed the method and intensity for an effective treatment progress.

In Vietnam, the perception of PA on prescription is completely new to most of entire population. Although having the habit of doing exercise, Vietnamese people do not perceive the impact of PA in NCDs treatments. With the project "Physical activity in non-communicable disease prevention" adapted for Vietnam, we intent to raise the interest of doctors and health care staff in this method for health enhancing PA. Health care practitioners will be trained and supported to implement prescribing PA in NCDs prevention and treatment. Benefit from this project does not only keep the community healthy but also efficiently save the health care cost.

## NCDs – fact and risk factors

### ***NCDs – the global health issue***

The rapid rise of NCDs represents one of the major global health challenges in the 21st century. NCDs such as cardiovascular disease, cancer, diabetes, chronic respiratory disease, mental disorder and osteoporotic fracture are indicated as the largest contribution to mortality in low and middle income countries. Reports from WHO shows that NCDs accounted for 60% (35 million) of total deaths in the world, 79% of worldwide deaths from NCDs

occurred in 144 low and middle income countries. It's projected that from 2006 to 2015, deaths from NCDs will increase by 17% all over the world. The greatest absolute number of deaths is indicated to occur in the Western Pacific and South East Asia regions. NCDs are currently the second leading cause of deaths for women in low – income countries and the leading cause in middle-income countries.

In Vietnam the prevalence of NCDs has increased rapidly over recent years. The National NCDs prevention program has been applied since 2002 with activities focused on education and training, behavior change communication and clinical management in communities. Beside the gained results, physical activity is also mentioned as a risk factor of NCDs. However, the PA promotion and PA on prescription in prevention and treatment of NCDs seems to still remain a big gap.

### ***Risk factors of NCDs***

Factors strongly increasing NCDs burden include tobacco use, physical inactivity and high consumption of unhealthy foods. In fact, NCDs are largely preventable. An estimated 50% (i.e. 13.7 million people) of deaths due to NCDs in low and middle income countries are caused by preventable heart disease, stroke, diabetes, cancer, asthma and osteoporotic fractures due to increased exposure to tobacco use, unhealthy diets, physical inactivity and the harmful use of alcohol. The proportion of hypertension and diabetes in Vietnam in 2008 were 2.7% and 5.7%, respectively. Annually, there are about 75,000 new cases in Vietnam. Prevalence of osteoporotic among postmenopausal women and men over 50 year of age are 25% and 17% at the hip and nearly 50% and 33% at the lumbar spine, respectively. The proportion of diabetes in girls is 18% and in boys 14%. In 2010, the National survey showed that 23.8% (i.e. 15 million person) of Vietnamese population use tobacco.

The above stat emphasizes the strong need in prevention and treatment of NCDs. Besides, physical activity in prevention and treatment of these diseases must be enhanced, used and adapted for Vietnam.

# QUESTIONNAIRE

(For Journalist)

## PROJECT “PHYSICAL ACTIVITY IN NON – COMMUNICABLE DISEASE PREVENTION AND TREATMENT IN VIETNAM”

Journalist’s name:.....Year of birth :.....

Publication: .....

Covering field :.....

**Question 1:** Do you know about the non – communicable diseases (NCDs)?

Yes

No

**Question 2:** According to you, which non – communicable disease are popular in Vietnam?

Cancer, diabetes, heart disease

Stroke, osteoporotic, stress

All

**Question 3:** Do you know about the positive effect of physical activity for NCD prevention?

Yes

No

**Question 4:** Do you know the concept “Physical activity on prescription in NDCs treatment”?

Yes

No

**Question 5:** Are you interested in the treatment method that allow you to keep healthy without using additional medication?

Yes

No

**Question 6:** If yes, what kind of information do you want to know?

Project task force

Practicing method

Scientific evidence

All