Barriers to implementation of physical activity in the hospital setting

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Introduction

The scientific evidence for the benefits of physical activity (PA) has accumulated in the last 20-30 years (1). Regular PA decreases the risk for cardiovascular disease and death (2) and also has a positive treatment and/or preventive effect on numerous other conditions, such as depression, osteoporosis and cancer (1;3). On the other hand, inadequate PA is related to higher health care expenditures and an increase of adults' PA levels to comply with guidelines may reduce health care costs substantially (4). The health benefits of PA seem to be dose-dependent, with the greatest benefits gained from increasing a very low level of activity (2). In addition, being sedentary has been proposed as an independent risk for future mortality (5), implying that unnecessary bedrest also in the hospital setting must be avoided.

In spite of the evidence supporting its widespread clinical use, PA is still underutilized as an established treatment modality in health care (6;7). An insufficeint number of patients are given advice or counselling on PA in the health care/hospital setting (7;8). In fact, promoting a healthier lifestyle should be a core issue in the health care system given the increase of non-communicable diseases (NCD) worldwide (9;10), especially as the major risk factors for NCDs are modifiable through a healthier lifestyle (10). Thus, the challenge remains to translate the known research on health benefits of PA to practical use in the health care system, both for prevention and treatment. The primary care and hospital settings offers numerous possibilities for PA to become a regular treatment modality for lifestyle related risk factors and disorders.

The goal of the present paper is to aid the implementation of PA in the hospital/health care setting, by highlighting facilitators and methods to increase the level of PA in patients, as well as identifying barriers to implementation. The latter may include: lack of motivation (of both patient and the health care personnel), structural deficiencies, and lack of education.

Barriers to implementation

Motivational factors

First of all, the motivation of the patient for change, as well as the resistance to altering unhealthy habits, is of great importance for the adherence and non-adherence to given lifestyle advice (11). It is difficult to change a negative lifestyle behavior (12), and psychological, behavioural and environmental factors must be considered at the individual level (11;13), showing that Health Psychology has a definitive role in modern health promotion (13). In addition to established models for behavioural change (11), new methods have emerged, with proven efficacy to improve the level of PA in patients (14). For example, the Swedish model of physical activity on prescription (PAP) (15), which is also described in a separate article in this guide.

Although the patients in different surveys state that they want and expect the health care system to provide guidance on lifestyle behaviour and PA, we do not adequately fulfill this task (16). While health care personnel in general are positive to lifestyle counseling (17), there are interesting variations among clinicians. In a nationwide German study in the primary care, female clinicians were less likely to perceive barriers to lifestyle counselling,

and were more likely to ask patients about lifestyle risk factors compared to their male colleagues (18). Traditionally, lifestyle advice is performed to a greater degree at primary care level (8). As indicated in a recent Swedish survey, doctors in the hospital setting may lack interest and/or knowledge to include counselling of lifestyle behavior as a part of the treatment. The reason for this may also be partly structural, as at the primary care level (19). Traditionally, hospital doctors ”treat sick patients” and do not provide (or have ”enough” time for), advice on preventive measures. Another possible barrier for implementation of PA in the hospital setting, may be the misconception that PA is only a preventive measure, when in fact it is also a treatment option for patients with established disease (20).

Lack of knowledge

Lack of knowledge on the effects of PA as well as on effective strategies for lifestyle improval could considerably contribute to the underuse of PA as a treatment modality (12;17;18;21). Very few hours of the physicians education is dedicated to the effects and implementation of lifestyle change including PA. In fact, more than half of the physicians trained in the U.S. in 2013, received no formal education in physical activity, as shown in the U.S. medical education curricula (22). This may ontribute to physicians feeling less prepared to counsel the patient on lifestyle behaviors (12;17;22). A study found that medical school students were more positive to lifestyle behaviour change before they started medical school compared to after their graduation (23). Not surprisingly, the PA habits of doctors and medical students positively influenced the likelihood of lifestyle counseling (24).

Thus, the medical faculties at major university Hospitals have a great responsibility in spreading the knowledge and scientific evidence on successful methods for increasing PA in health care (9;21;25), to medical students as well as doctors at various levels of specialization. University Clinics should spearhead the implementation of evidence-based lifestyle behavioural change methods in the health care system, starting at their respective “home” clinics. The learning must be effective and evidence-based (19), as interactive techniques (audit/feed back) and reminders have been shown to be more effective in changing the physicians´clinical practice, as compared to printed information and presentations by opinion leaders (25).

It is necessary, that PA and the knowledge on how to achieve lifestyle changes must have a more pronounced role in medical educations at different levels, in the future. Here it is important to focus also on logistical and administrative barriers to implementation.

Lack of structural and logistical support

A lack of structural support, including lack of scheduled time for lifestyle counselling, inadequate/lack of reimbursement and lack of support from superiors (17;19;21) also contributes to lower motivation of working with lifestyle-related prevention and treatment. The working load of physicians, make it (increasingly) difficult to prioritize time for lifestyle counseling (17). Furthermore, the financial models commonly applied in the health care system do not allow these prioritizations (17;19). However, many large structural changes in health care have been successfully implemented in the last decade, and many of them also at a very fast rate. Modern health care will need to address the amounting problem of lifestyle related disease, by increasing the profile of lifestyle adjusting care-taking, such as improving the level of the PA in insufficiently active patients (9;20;26). By emphasizing the need for these measures, the health care system, at all levels, should aid the implementation of PA as regular treatment modality (9). This includes allocation of time, reimbursement and structural support (17;19). Our future health care cannot afford not to move in this way.

Structural and logistic problems could also be barriers to working with lifestyle counselling, particularly in the hospital setting. Patients are staying only a short time in the hospital and often many different specialists are involved in the patients care. Also, poor communication between different units within the hospital, is an important issue to consider when identifying additional barriers. Lack of fitness facilities for the patients in the hospital setting is in many cases also a barrier. Importantly, there is still a lack of high-quality studies on the efficacy of increasing the PA level in the hospital setting. Finally, there is a great need for improving the communication between the hospitals and the responsible for the continued activity outside the hospital, be it primary care or ordinary training/fitness facilities, as well as in the organisation of a structured follow-up.

Facilitators

National and international recommendations

International as well as national recommendations, uniformly recommend PA as first-line treatment for a number of major non-communicable diseases (NCD´s) in today´s health care, including diabetes, obesity, hypertension, osteoporosis and depression (10;27). This is an important message to the health care system, to

which they have to respond. As mentioned above, the patients expect health care personnell to deliver lifestyle advice (16), and also consider it to be the responsibility of the health care system to help them be more physically active (16;28). Still many physicians and administrators believe lifestyle measures to be someone else´s problem (society, schools, parents), focusing only on the preventive aspects of PA. In this case, developing national guidelines as a ”pressure from above” on the health care system, could be central to aiding the implementation of PA as a method of treatment.

As an example, the Swedish National Board of Health and Welfare issued their guidelines on disease prevention in 2011. Along with other approaches on lifestyle factors, methods for increasing PA were reviewed and evidence graded (29). The conclusion summarizes that ”the health care system should offer advice with added written prescription or pedometer and individual follow-up, to all patients being insufficiently physically active”. This also summarizes the core content of the Swedish model of physcial activity on perscription (PAP) as well as other similar models as an evidence-based method that could be used within the health care system to promote physical activity in different settings, including the hospitals.

The role of specialists and their organisations

The efforts of many different specialties will be needed to tackle the challenge of implementing PA as an ordinary part of hospital care (30). Patients with a sedentary lifestyle and who would benefit from an increased level of PA will be detected by most specialties, including general practice, cardiology, internal medicine, pain medicine, psychiatry, orthopedics and surgery. Indeed, a majority of patients seeking health care would potentially benefit from increasing their PA level. In those areas where sports medicine specialists are available, they will fulfill an important role as their knowledge on how PA affects the body and how disease will affect the ability to be active is essential, also as a source of reference for other specialists (30).

A majority of treatments initiated in the hospital setting will continue when the patient are referred to further follow-up in the primary care setting, thus, if PA will be prescribed regularly in the hospital setting, it could have a major effect on the long-term continuation of this treatment. Therefore, the hospital doctors hold a key to the success of PA as a treatment modality.

The role of national and international networks

In recent years, the Swedish and the international HPH network on Health Promoting Hospitals and Health Services (HPH Network) have focused on three target groups; the patient, the community and the healt care staff, as all three groups are seen pivotal for the increased focus on health promotion in the health care setting. Many of the logistical and administrative barriers to the establishment of PAP have been addressed, such as medical record integration, reimbursements and logistics. Different reimbursement models have been applied in different part of Sweden, some regions reimburse all prescriptions, while others reimburse only followed-up prescriptions. For PA to be integrated into the hospital setting, similar national and local networks need to be maintained.

Today, many international organizations recognize the importance of PA for health, e.g. the World Health Organization (WHO) (27) and the associated network of Health Promoting Hospitals (HPH), Health promoting Physical activity (HEPA), European Society of Cardiology/European Association for cardiac Prevention and rehabilitation (ESC/EACPR) (31), the International Olympic Committe (IOC) (9), the European Federation of Sports Medicine Associations (EFSMA), Exercise is Medicine (EIM) (20), among others. According to the international HPH Network, a hospital may be considered as offering health promoting, when physical activity has been integrated as a part of the regular therapeutic alternatives in the hospital setting. The listed organizations having slightly different foci, typically organizing different specialists, but they complement each other as they share the common goal of increasing PA as a mean to increase health. In the future, stronger and closer collaboration between relevant organizations are needed.

Summary

As future costs for lifestyle related diseases are expected to multiply worldwide, we now have collected sufficient evidence on the effect of PA for health, as well as on methods to increase the level of PA in patients. However, PA is still underutilized as a treatment tool in health care, while the preventive use of PA is more recognized. Several barriers, motivational, educational as well as logistical and administrative, have to be addressed. As for facilitators, guidelines and reimbursement schemes are needed as well as national and international collaboration between relevant organizations devoted to increase the use of PA in the health care setting. The implementation of PA in the hospital setting is equally important as the ongoing implementation of referral systems in general practice and other

health-care setting. Considering the burden of illness in patients within the hospital settings and the potential benefits of increasing PA level in inactive patients, perhaps the largest economical gain can be seen within the hospital setting.

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