

# Exercise medicine in the training of future health care professionals: for tomorrow's patients

Ann Gates and Prof Patrick Callaghan detail the initiative to make 'every contact count' for physical activity, for patients, via the future NHS health care workforce.

## Introduction

Exercise can cut the cost of treating chronic disease, help people recover from illness and improve quality of life in those living with long-term conditions. However, few people exercise at levels likely to confer these benefits. The *Everybody Active, Every Day* (Public Health England [PHE], 2014) national initiative to improve people's exercise levels, highlights the importance of galvanising networks of professional, national health service (NHS) experts, in promoting physical activity, throughout the life course. In response, *Exercise Works*, an organisation promoting the role of exercise in the prevention and treatment of non-communicable diseases, organised the curation and development of teaching resources for use in undergraduate curricula for all student health care professionals and commissioned an evaluation of these resources. This article details the initiative to make 'every contact count' for physical activity, for patients, via the future NHS health care workforce, and reports the results of a project to evaluate the quality and relevance of these teaching resources to the undergraduate education of student: doctors, dentists, pharmacists, nurses, midwives and all allied health professionals.

## Background

In 2014, Gates (2015a) described a leadership initiative, to provide all UK undergraduate medical schools, with a curricula and free resources on exercise medicine in the prevention and treatment of non-communicable diseases. The second phase of this philanthropic project (Gates, 2015b), saw the 2015 launch of: an interdisciplinary, global, undergraduate, curricula and resources. This now provides an opportunity for all future health care professionals, to make every contact count for physical activity advice and support.

The WHO Europe Strategy for Physical Activity 2016-2025 (World Health Organization, 2015) states that: "Member States should work together with medical and other health education institutions to improve the curricula of all health professionals with regard to the benefits of physical activity for health." The resources were finalised before this strategy was ratified, but not only fulfils this WHO criteria, but highlights the importance of being proactive in the development of strategies and visions for the future of medical and clinical education.

These latest, completely revised undergraduate resources, include presentations and a textual module covering all aspects of an 'exercise prescription'. In addition, there is comprehensive, evidence based, 'bite-sized' information on exercise in: pregnancy, osteoarthritis/rheumatoid arthritis, osteoporosis/sarcopenia, falls prevention, and motivational interviewing, in addition to 14 presentations and a textual module, covering chronic diseases, surgery, and exercise. The National Institute of Health and Care Excellence (NICE) guidance and quality standards on physical activity and exercise referral underpin each learning outcome within the resource set. There are over 76 NICE recommendations advising physical activity interventions by health care professionals: each piece of NICE guidance pertaining to physical activity or disease condition, is included, and linked throughout all of the resources.

These new teaching materials supersede all previous versions. They are valid for 3 years, and will be updated annually, by the international team of contributors, and, when the World Health Organization and national bodies' revise their physical activity guidelines.

The resources were developed by a team of international experts in: chronic disease prevention and treatment, exercise medicine, physical activity research, behavioural medicine, surgery, and patient care. The team of authors comprised over 30 national and international authors. The text module is a modified version of the excellent Motivate 2 Move information, which Dr Brian Johnson, General Practitioner, sport and exercise medicine doctor and project team member, authored. See Gates (2015b) for further details of the interdisciplinary authors involved.

The resources are available, free, only to undergraduate schools of medicine and health sciences, in the UK and worldwide. All student/prequalification: health care professionals, as defined by the NHS, should be able to access the content via their University. The resources are not free for other undergraduate courses that do not result in a clinically recognised, NHS health care professional, qualification. Please contact [ann@exercise-works.org](mailto:ann@exercise-works.org) for access details to the resources, together with the terms and conditions of use.

## Evaluation of resources

The aims of the evaluation were to assess the quality and relevance of the teaching resources to the undergraduate education of doctors, nurses, midwives and allied health professionals. The method of the evaluation was an online survey administered via Bristol Online Surveys (BOS). The survey tool was adapted from a standard instrument from the Centre for Public Education in the USA. The tool contains 16 items assessing the content, relevance and style of the slides anchored by a five point likert scale asking assessors to rate on a score of 1, low to 5, high and a final item asking respondents to provide an overall rating on a 10 point scale from 1, extremely poor to 10, exceptional. All 17 items had an open question soliciting qualitative comments. A national and international panel of healthcare professionals and academics with expertise in nursing, midwifery and allied health professions, sports and exercise medicine and topic expertise in various disease conditions assessed the resources. We invited two national and one international expert to review each resource based upon their topic expertise from a list compiled by Exercise Works and the lead evaluator. In total 44 experts were selected on the basis of their known expertise as evidenced through positions held, publications on the topic areas and research activity on the topic.

Twenty nine assessors completed the survey. Their median rating for the resources was 8/10: excellent. Assessors rated the resources highly on content, relevance, and evidence base, and the clarity and relevance of learning outcomes. Moderate ratings were reported for the resources being examples of best practice and engaging learners. The resources were rated lowest on meeting individual learners' needs. The median rating for the



GLOBAL 2025 TARGET

PHYSICAL  
INACTIVITY

10%  
REDUCTION

**Above:** The World Health Organization has a global target to reduce physical inactivity by 10%, by 2025  
Courtesy World Heart Federation Emerging Leaders Programme

resources was excellent, with most resources scoring above average. Qualitative comments show the resources are evidence-based, but could encourage more student reflection and interaction. The resources are relevant for a range of health care professionals, although their usage may depend on users' experience.

Public Health England funded the evaluation. The University of Nottingham, School of Health Sciences, led the evaluation and concluded that:

“activating a network of national and international experts to develop and assess teaching resources should enable health care educators to promote the role of exercise in the prevention and treatment of ill-health and improve the quality of life of those living with long-term conditions.”

### Launch

The resources were launched in September, 2015 by The University of Nottingham and promoted by Public Health England, the British Heart Foundation National Centre for Physical Activity and Health, the Royal College of Surgeons of Edinburgh, and the Chief Medical Officer for England. They have also been officially endorsed by the UK Council of Deans of Health.

Over 15 UK medical schools and several UK schools of health have introduced the resources into teaching practice, since the launch of the resources. Several international schools of health professions are also using and promoting the resources. A recent quote, by physiotherapist Anna Lowe, in a BJSM blog, highlights their use in everyday teaching: “we are delighted to be using the resources to support our training of Tomorrow’s Physiotherapists.” (Lowe, 2015).

### Conclusions

The results of this evaluation suggest that activating a network of national and international experts to develop and assess teaching resources should enable health care educators to promote the role of exercise in the prevention and treatment of ill-health and improve the quality of life of those living with long-term conditions. In conclusion: a vision to train undergraduate, student health care professionals, in the basics of providing safe and effective exercise advice, has enabled a significant proportion of UK undergraduate schools of medicine and health, to incorporate specific teaching of the national and international physical activity advice, available for the main disease conditions. There is now, an evaluated, endorsed, quality resource, available, free (for undergraduate NHS health care professional courses), and accessible via Universities, for this purpose! ■



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### Disclosure notice:

Ann Gates is a member of the World Heart Federation, Emerging Leaders Programme and Founder and CEO of Exercise-Works! Ltd.



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*Programme subject to validation*

