PAHRC Annual Report 2016

Physical Activity for Health Research Centre
Institute for Sport, Physical Education & Health Sciences
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1. Message from the Director: Prof Nanette Mutrie

Welcome to our 2016 annual report for the Physical Activity for Health Research Centre (PAHRC). This has been another busy year for PAHRC - we have been awarded 4 new grants and currently collaborate in 14 grants totalling almost £1.3m to the University of Edinburgh and more than £800,000 for MHSE. We have published 46 papers and made over 40 oral and poster presentations.

We continue to strengthen our links with other organisations, both national and international, involved in the promotion of physical activity for health. This year we were involved in a major collaboration with the Scottish Government (Active Scotland Division) to establish a Scottish physical activity network – Scottish Physical Activity Research Connections (SPARC). We co-hosted a SPARC conference with 140 delegates in October 2016 and plans are underway for a further conference in November 2017.

Our members are involved in a wide range of research areas: promotion of walking; investigation of sedentary time; physical activity amongst key at risk groups; measurement and surveillance; and evaluation. We currently have 22 core member, 32 associate members and 140 friends of PAHRC. We continue to hold our meetings, which are the heart of our research centre, on Wednesdays at 12 noon and you are very welcome to attend any of these events. You can sign up to receive our weekly newsletter, which gives details of our meetings, by contacting pahrc@ed.ac.uk

A number of our members have been involved in the development and delivery of the Sit Less, Get Active MOOC, a free online course which was launched in June 2016 and has attracted over 40,000 participants! We hope those who participate will become more active and share their knowledge https://www.coursera.org/learn/get-active

We continue to ensure that knowledge exchange, creating impact and advocacy are all key aspects of our work and this year have collaborated and led work to train future health care professionals in physical activity for health. We have continued our collaboration with Paths for All and the Scottish Collaboration for Public Health Research and Policy (SCPHRP).

At PAHRC we try to 'practice what we preach' (which is to sit less and move more) by incorporating physical activity into our working week. Meeting participants are encouraged to stand if they wish and we always have standing ovations for presentations. We take short active breaks to play table tennis, complete a couple of pieces of jigsaw or do 'walk and talk' meetings. We follow the recommendations of not holding meetings too early or too late and we try to keep one day free of meetings (Fridays). We would love our visitors to take part in these activities. Please come and visit!

If you are interested in physical activity for health, please do get in touch as we develop our networks across and beyond the University.

2. PAHRC's Objectives

The main focus of PAHRC is to develop, test and implement interventions which encourage people of all ages to 'sit less and move more'.

In December 2012, our strategy for the development of PAHRC identified five key objectives:

I. To attract external funding to support our research (see section 7).

II. To publish in esteemed peer reviewed journals (see section 8).

III. To actively participate in the research community (see sections 5, 9 and 10).

IV. To actively participate in the wider physical activity and health community to facilitate knowledge exchange (see section 5, 11 and 12).

V. To support the development of all group members through an inclusive and mentoring environment (see section 3).

The progress towards each of these goals is discussed throughout this document.

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3. About the Research Centre

PAHRC is based within the Institute for Sport, Physical Education and Health Sciences in Moray House School of Education and Sport and has members from across the University.

Our membership structure of core, associate and external members of PAHRC facilitates interdisciplinary collaboration and knowledge exchange.

There are currently 22 core members of PAHRC whose activities are summarised in this report. Core members are staff, honorary staff or doctoral research students at the University of Edinburgh for whom physical activity for health is their main area of research. We have 32 associate members from across the University, who are staff and research students for whom physical activity for health research is one aspect of their work (e.g. colleagues in geography, landscape architecture or medicine).

External members are considered as 'friends of PAHRC' and this group consists of academics, practitioners or policy makers who are interested in keeping up to date with our work and/or collaborating with us. We currently have 140 'friends of PAHRC'.

We have weekly research meetings to which core and associate members of PAHRC are invited to attend. Many of these meetings are also open to 'friends'. These meetings allow the team to build and to learn from each other, which nurtures the supportive and mentoring environment we want for PAHRC.

Topics this year have included journal club activities on key sources; responses to policy documents; rehearsal of presentations; interpretations of results; proposal ideas; and workshops on PURE impact reporting, media planning and social media tips. We have also welcomed thirteen external speakers on related topics.

A final aspect of our style of working, is that we endeavour to practice what we preach in terms of sitting less and moving more. We do this by incorporating standing breaks to our meetings; having 'standing ovations' or 'active applause' after speakers; practicing yoga stretches and engaging in 'walk-and-talk' meetings which are all designed to limit time spent sitting down and incorporate physical activity into discussions. We also try to influence others to adopt similar practices when working across and beyond the University. Our social and meeting area is designed to encourage standing and facilitate active breaks with a table tennis table, golf putting practice, a balance board, jigsaws and Lego. We have recently received a standing desk from Ergotron which we use as a hot desk for those who wish to use it.

Yoga break during PhD supervision meeting

4. Research Themes

While we know the epidemiological risks of inactivity and the patterning of inactivity across the population, there is much less known about how to successfully change behaviour and create more active lifestyles across all ages. The main focus of PAHRC is to develop, test and implement interventions which encourage people of all ages to 'sit less and move more'. We have reframed our message from 'sit less and walk more' of previous years to 'sit less and move more' to encompass the wider range of physical activity and sedentary behaviour interventions we are researching.

We are interested in all segments of the population, but our current priorities reflect an attempt to reduce health inequalities by targeting those who are at most risk of low physical activity, such as older adults, those with medical conditions and people from ethnic minority groups.

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Our research planning follows established frameworks including: acknowledgement of the social-ecological framework that influences health; the MRC guidance on developing and evaluating complex interventions; and the 'seven investments that work' recommended by the Toronto Charter for Physical Activity. Across the settings suggested by the 'seven investments that work' statement and key target groups, there are a number of key themes that we are currently involved with and recent progress in each is now discussed.

4.1 Promotion of walking

We have built upon our internationally recognised track record in developing and testing interventions to promote walking by applying our learning to new contexts and populations such as adults with intellectual disabilities, older adults, ethnic minority groups and walking via playing or spectating golf.

We have continued to implement findings in a previous grant led by the University of Glasgow in which football fans were encouraged to walk as part of a healthy lifestyle approach to losing weight ('*Football Fans in Training (FFIT'*), funded by the NIHR). This 'social innovation' of using football clubs to promote the healthy lifestyles of their fans has been developed further in a large European grant (*Euro-FIT*) and in new contexts of prisons (*Secure-FIT*), and rugby (*RUFIT*). We have also formalised links with Paths for

All (Scotland's main delivery agent of health walks) via a PhD scholarship (Laing), a UoE KE and impact funding (Niven) award and collaboration on funding applications. Nanette Mutrie was involved in the development of the Scottish Walking Strategy and Ailsa Niven is a member of the implementation group for this strategy. These appointments reflect our acknowledged expertise in the promotion of walking. We continue to offer annual training to Paths for All to support walking coordinators in their continued professional development.

A novel area which is explored by PhD Student, Dr Andrew Murray (Supervised by Mutrie, Kelly and Liz Grant and funded by the World Golf Federation) is the use of golf to promote walking for health amongst players and spectators.

Changes to the physical environment can also have an impact on walking and cycling. We (Mutrie & Baker) have previously worked on an EPSRC project, *iConnect*, which investigated impacts of physical infrastructure on active travel behaviours and on an evaluation of the health and wellbeing effects of the completion of the extension of the M74 motorway through Glasgow (led by Dr David Ogilvie, MRC Unit, Cambridge). We continue to publish in these areas and have recently applied for NIHR funding for an evaluation of the health impacts of the introduction of 20mph zoning in Edinburgh and Belfast (Kelly, Baker, Turner, led by Jepson at SCPHRP).

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4.2 Investigation of Sedentary Behaviour

This is a novel area of research that we have explored in recent years. Sedentary behaviour, which can be defined as any waking behaviour where sitting or lying is the dominant posture and energy expenditure is low, has been shown to have a negative impact on health independent of levels of physical activity behaviour.

We have used our knowledge of behaviour change in walking to guide the development of interventions which might influence sedentary behaviour. Dr Claire Fitzsimons (Chancellor's Fellow) now leads this area of research and has a particular interest in sedentary time amongst older adults and stroke survivors.

Dr Claire Fitzsimons and Prof Nanette Mutrie are co-investigators on a project exploring determinants of sedentary behaviour amongst older adults (*Seniors USP*, led by Prof Dawn Skelton, Glasgow Caledonian University and funded by the MRC).

Sedentary behaviour has distinct deleterious health outcomes, yet there is no consensus on best practice for measurement. Together with colleagues at Glasgow Caledonian University, Fitzsimons has been working on behalf of the Seniors USP consortium on the identification of the optimal tool for population surveillance of sedentary behaviour, using a systematic framework.

A framework, Taxonomy of Self-report Sedentary Behaviour Tools (TASST), was developed based on a systematic inventory of existing tools. The inventory was achieved through a systematic review of studies reporting sedentary behaviour and tracing back to the original description. Despite the limited evidence, mapping existing sedentary behaviour tools onto the TASST framework has enabled informed recommendations to be made about the most promising features for a sedentary behaviour surveillance tool, and to identify the aspects on which future research and development should focus. NHS Greater Glasgow and Clyde have registered an interest in using this surveillance tool for their Board-Wide Health and Wellbeing Survey; results from which are used to help shape local policy and practice in this area.

Dr Victoria Palmer, was the qualitative research assistant for the Seniors USP project, who explored older adults' perceptions of sedentary behaviour. This research examined what people do when they are sedentary and how important these activities are to them as well as seeking suggestions for ways older people might be encouraged to become less sedentary and the barriers that might stop them doing so. This work has now been extended with an ESRC Impact Acceleration Award (led by Cindy Gray, University of Glasgow) to work with Paths for All to develop sedentary behaviour information resources specific to older people.

In collaboration with colleagues in Geriatric Medicine, Dr Claire Fitzsimons is leading on two grants exploring patterns of sedentary behaviour in stroke patients (CSO, ELHF). Sarah Nicholson is the Research Assistant on a CSO funded project entitled *'Too much sitting in extended bouts in stroke survivors: a qualitative study to inform novel interventions'* and Susan Loh is the Research Assistant on an Edinburgh and Lothians Health Foundation grant: *'A feasibility study to identify an effective method to provide feedback and remote monitoring on sedentary behaviour in stroke survivors'*.

As part of a collaborative European FP7 funded grant (*Euro-FIT*), Prof Nanette Mutrie and Dr Anne Martin led on the sedentary behaviour element of this large project. Informed by a systematic review, Dr Anne Martin led the *'Sit Less and Step More Study'*: a Pilot randomised controlled trial (RCT), to test a simple intervention, incorporating behaviour change techniques, supported by self-monitoring feedback from the novel SitFIT device, to reduce sedentary behaviour and increase physical activity amongst adults.

4.3 Physical Activity amongst Key at Risk Groups

Whilst our research is applicable to the whole population, in order to try to reduce health inequalities, we focus on those who at most risk of physical inactivity.

We believe people of all ages can benefit from becoming more active and so our research takes a life course approach. However, we are particularly interested in children, adolescent girls and older adults as key target groups.

Children and Young People

'Better Movers and Thinkers' is a PhD project led by Andy Dalziell who graduated in 2016 (supervised by Mutrie). His thesis investigated how teaching Physical Education in a particular way, which emphasised co-ordination, could influence short term cognitive improvements in primary school children.

Dr Sam Fawkner and Dr Ailsa Niven have a research interest in investigating physical activity amongst adolescent girls. They supervised Yvonne Laird in her PhD research which explored how social support influences physical activity amongst this group. Yvonne successfully completed her Viva and graduated in 2016.

Helen Weavers (supervised by Fawkner and Dr Josie Booth - an associate member of PAHRC), is exploring resistance training in children and how this might affect physical activity levels.

Older Adults

Older adults are also at risk of low activity and we are exploring physical activity in this age group via two PhD projects.

In the *'We ROAM'* study (*Walking Experiences: Researching older adult motivations*), Nicky Laing (supervised by Niven and Fawkner) is exploring why older people start and continue to walk with group led health walks, such as those led by Paths for All. In addition to aerobic activity, the development of strength and balance is another key part of physical activity for health recommendations; one which we have described as 'the forgotten guidelines' (Strain, 2016). Divya Sivaramakrishnan (supervised by Mutrie and Fitzsimons) is exploring the use of yoga as a mechanism to support strength and balance amongst older adults.

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Ethnic Minority Groups

Those from ethnic minority groups are also at risk of physical inactivity and Dr Graham Baker (Chancellor's Fellow) leads research in this area. His research area combines his knowledge from testing walking interventions for the general population via *'Walking for Wellbeing in the West (WWW)'* study and the development of obesity interventions for children from diverse ethnic groups (*DEAL Study*). In the '*South Asian Walking Study (SAWS)'* qualitative project, funded by MRC PHIND, Dr Baker and Dr Tasneem Arshad are working with community groups and Paths for All to explore how to adapt walking interventions for South Asian groups.

People with Medical Conditions

Prof Nanette Mutrie has continued a research interest in physical activity and breast cancer, following on from a collaborative grant with Professor Annie Anderson at University of Dundee to pilot the use of a breast screening service as a vehicle for providing women with physical activity advice in relation to prevention *('ActWELL'*, led by Anderson, CSO). The project team have now received funding from the Scottish Government to test the wider implementation of the *'ActWELL'* project in community based settings (Prof Nanette Mutrie and Dr Chloe McAdam are Co-Is on this project, led by Prof Anderson).

In a related area, Prof Nanette Mutrie, Dr Chloe McAdam and Hayley Connell are part of a research team led by Plymouth University Peninsula Schools of Medicine and Dentistry (including colleagues from Exeter, Birmingham, Southampton, Brunel, Edinburgh, Marjon and the NHS in Cornwall) which was awarded over £780,000 by the National Institute for Health Research Programme Health Technology Assessment (NIHR HTA) for the *'eCoachER'* study. The team are working on a multi-site RCT exploring the potential of adding web based behavioural change support to traditional exercise referral schemes as a way to increase uptake and sustained physical activity by patients. The *'eCoachER'* trial is interested in patients with long term conditions (obesity, hypertension, type 2 diabetes, osteoarthritis, or a history of depression) who are referred to services to help them become more physically active and will continue to January 2018. Fieldwork has recently been completed and analysis, write up and dissemination will follow.

4.4 Measurement and Surveillance

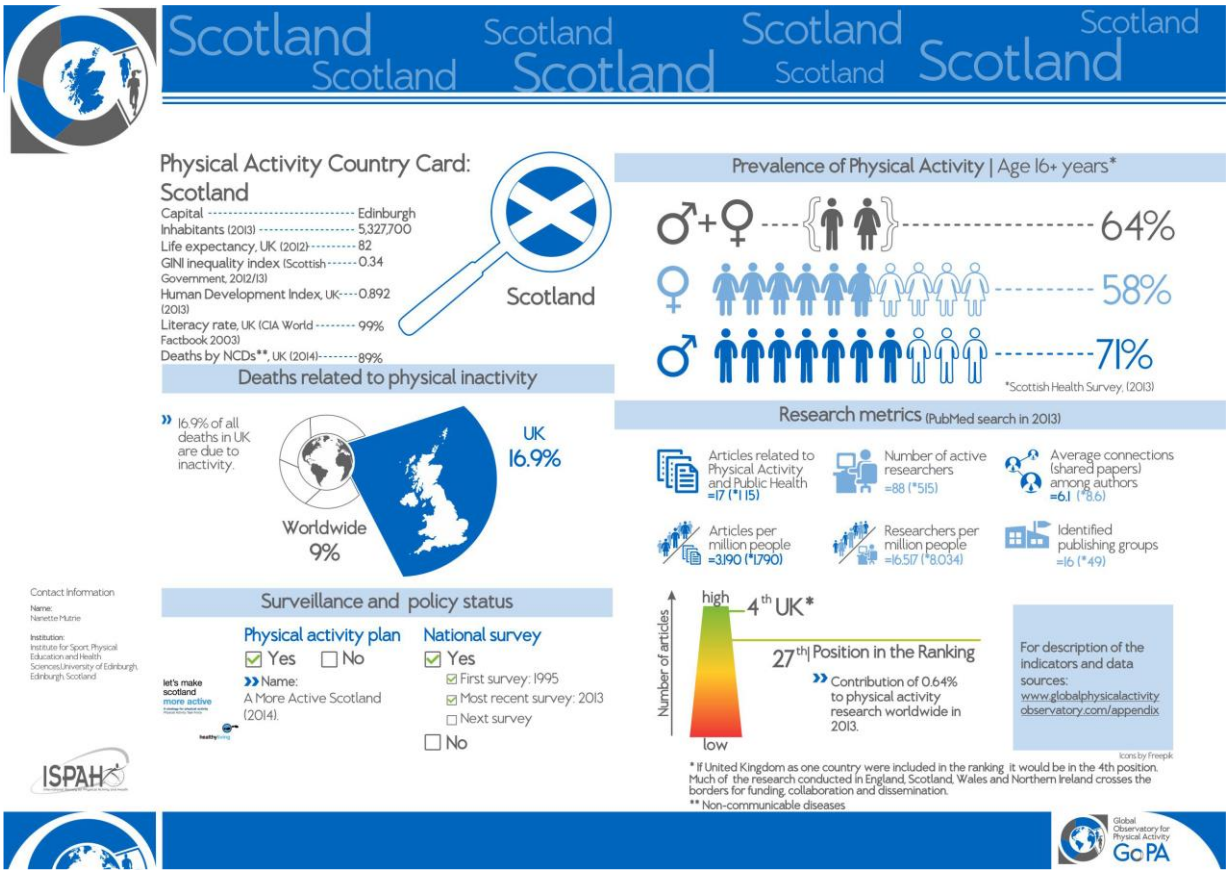
Appropriate and high quality measurement of physical activity and sedentary behaviour is fundamental to research, policy and practice; whether monitoring population trends, understanding sub-populations and high-risk groups, assessing correlates and determinants, or testing intervention effects and economics. Thus, this work is an over-lapping and integral component of the research conducted across all of PAHRC's key themes. We are interested in how we can improve our understanding and selection of available methods and develop new and refine existing approaches. Kelly, Fitzsimons and Baker have recently published a Framework on Validity and Reliability to inform these processes. We (Baker, Kelly, Strain) also received a University of Edinburgh Seedcorn Grant to further develop the Framework as applied to the physical activity and sedentary behaviour questions contained within the Scottish Health Survey.

The measuring of Behavioural Change Techniques (BCTs) in psychological interventions has also been a focus of our recent work. We have used a tool kit to assess BCTs in published papers as part of systematic reviews to understand effective interventions and have recently audited BCTs in exercise consultations delivered as part of a NHS Greater Glasgow and Clyde's exercise referral scheme to help assess the quality of consultations (Baker, McAdam with Oracova NHS Greater Glasgow & Clyde).

Surveillance is a core aspect of our measurement work. It has an important role to play in national policy. Strain (studying for a PhD in this topic) recently published a key paper on participation in muscle strengthening and balance and co-ordination activities by adults and older adults in Scotland using our National Surveillance measure (the Scottish Health Survey). This was well-received and subject to national media coverage. Tessa Strain was also successful in securing an internship with the Active Scotland Division at the Scottish Government where she developed an infographic and Physical Activity profiles for every Local Authority in Scotland based on data from National Surveys. These have been well received and can be used to prioritise and shape policy and practice at a local level.

Infographic developed by Tessa Strain while on internship
http://www.gov.scot/About/Performance/scotPerforms/partnerstories/Outcomes-Framework/CMO-Guidelines-ADULT

We are also involved in the Lancet Physical Activity Observatory country card project that provides a global comparison of physical activity surveillance, policy, and research indicators across countries. Prof Nanette Mutrie is the country lead for Scotland; Dr Paul Kelly and Tessa Strain contributed to the collation and dissemination of the results.



4.5 Evaluation

Dr Paul Kelly has a research interest in health benefits of walking and cycling and improving the way we assess physical activity behaviour. This has supported our more recent work in evaluation of physical activity which builds on the expertise in this area of Mutrie and Blamey.

Kelly, McAdam and Turner are working with NHS Dumfries & Galloway in a project evaluating physical activity interventions in the health board and mapping projects to key aspects of the Toronto Charter. This commissioned research builds on Dr Kelly's work on HEAT (Health Economic Assessment Tool) and Pragmatic Evaluation and was commissioned by NHS Dumfries & Galloway to prioritise future funding and guide practice.

Dr Paul Kelly co-led, with colleagues from Oxford and Sydney, the Pragmatic Evaluation in Physical Activity and Public Health course which was held on the African continent for the first time from 5th – 7th June 2016. This was the third iteration of the course globally and it was hosted by the University of Cape Town as an official Satellite event of the annual International Society of Behavioural Nutrition and Physical Activity conference held in Cape Town from 8th-11th June 2016. The course was also endorsed by the International Society for Physical Activity and Health (ISPAH) and the African Physical Activity Network (AFPAN).

The pre-course online content was provided by the WHO Collaborating Centre for Physical Activity, Nutrition and Obesity at the University of Sydney. All course completers were invited to join a growing international network of alumni that now contains 61 members from 29 different countries.

Plans for future iterations of the Pragmatic Evaluation in Physical Activity and Public Health course are in motion in different parts of the world and further details can be obtained by contacting the course coordinators (pragmatic.evaluation@gmail.com).

5. Knowledge exchange and other activities

Much of our KE activities have been discussed alongside our research themes in order to showcase some of the developing areas for Impact. Some additional activities are also discussed below. These help promote our research centre, advocate for physical activity and share our expertise and styles of working with others in related fields.

5.1 Scottish Physical Activity Research Connections (SPARC)

In October 2016, 140 researchers, practitioners and policy makers from across Scotland came together to discuss current physical activity research relevant to policy and practice at the inaugural Scottish Physical Activity Research Connections (SPARC) Conference.

SPARC was organised by PAHRC and Active Scotland Division, Scottish Government. The event was funded by Active Scotland Division.

We invited abstracts which related to the Active Scotland Outcomes Framework, which sets out the Scottish Government's ambitions for a more active Scotland. The conference was opened by Professor Nanette Mutrie (PAHRC Director), Louise Unwin (Head of Strategy, Active Scotland Division) and Dr Gregor Smith (Deputy Chief Medical Officer).

The morning and afternoon keynote addresses were given by Professor Billie Giles-Corti (Director of the McCaughey VicHealth Community Wellbeing Unit, University of Melbourne and Lead Investigator of the NHMRC Centre for Research Excellence in Healthy Liveable Communities) and Professor Adrian Bowman (Sesquicentenary Professor of Public Health, Sydney School of Public Health and Co-Director of the WHO Collaborating Centre on Physical Activity, Nutrition and Obesity).

Prof Billie Giles-Corti

There were 37 poster presentations and 11 oral presentations which covered a wide range of topics relating to physical activity in childhood and adolescence, adults, ethnic minorities and active travel. PAHRC members made two oral presentations and five poster presentations.

Following on from this event, we are now in the process of establishing a SPARC network of physical activity researchers, policy-makers and practitioners in Scotland.

The network has several possible uses. First, to assist government with information for policy discussion in areas related to the six Active Scotland Outcomes. Second, to increase the flow of information between research, policy and practice. Third, to facilitate collaborations between researchers who are working on similar themes. A further SPARC event is planned for November 2017.

5.2 Sit Less, Get Active MOOC

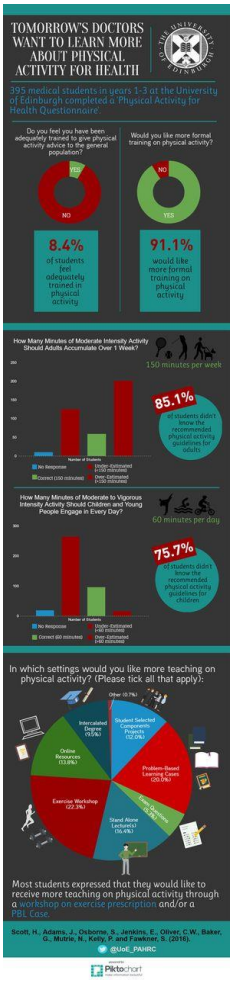
The Sit Less, Get Active MOOC (Massive Open Online Course) is led by Dr Danijela Gasevic (Centre for Population Health Sciences, University of Edinburgh, PAHRC associate member), which also involves PAHRC core members (Nanette Mutrie, Graham Baker, Andrew Murray, Chris Oliver) and Helen Ryall from Sport and Exercise (University of Edinburgh, PAHRC associate member). MOOCs are online courses that can be taken by anyone from any part of the world as long as the person has access to the Internet.

The main goal of this 3-week MOOC, which started in May 2016, is to empower and enable people to sit less and move more in various settings such as their neighbourhood, home, work, or school. Various practical examples on how to sit less and be more active are presented, such as helping people learn how to monitor their activity, setting realistic goals and providing suggestions for how to make activity a habit. Embedded within the course is a pragmatic evaluation of the impact of the MOOC on learners' physical activity and sedentary behaviour and associated health outcomes.

Almost 27,000 people signed up for the first delivery of the course and since then over 40,000 in total have signed up.

5.3 Physical Activity in Medical Curriculum

Building on a University of Edinburgh, Institute of Academic Development Networking grant, we have developed links with the Medical School in order to enhance the learning undergraduate medical students receive on physical activity. As part of her student internship with PAHRC in January/February 2016, Hilary Scott surveyed medical students on their understanding of the physical activity guidelines and has since published her findings as an infographic in a leading journal (Scott, 2016). As health professionals, Prof Chris Oliver and Dr Andrew Murray are excellent advocates of this area of work and continue to publish blogs and articles in this area.



H Scott Infographic

Dr Jenni Harden and Dr Sam Fawkner (Joint PIs with Co-Is – Dr Danijella Gasevic, Dr Paul Kelly and Professor Chris Oliver) were awarded a Principal's Teaching Award Scheme (PTAS) grant for *'A Flipped Classroom Approach'* to facilitate a formal teaching and learning opportunity in which first year medical students will be exposed to the basic principles of physical activity for disease prevention and treatment. Dr Paul Kelly has also led on the development of an intercalated BSc in Physical Activity which will be offered to medical students in 2017.

5.4 Yoga for Staff and Student Wellbeing

We continue to practice what we preach to enhance staff and student wellbeing and are lucky to have excellent skill sets for delivery in this area. Yvonne Laird and Divya won funding to deliver *'Yoga Docs'* – Yoga for postgraduate students in MHSE and more recently this has been extended to staff and students within ISPEHS.

5.5 Internship with RKE Office

PhD Student, Divya Sivaramakrishnan was awarded an internship with the RKE Office to support the recording of research impact using PURE. This has enhanced the centre's understanding of this area and Divya has since provided training for our staff on recording their own impact.

6. The Team

PAHRC currently has 22 core members (including 2 honorary professors) whose research focuses on physical activity for health. We have 32 associate members from across the University for whom physical activity is an aspect of their work.

Dr Graham Baker
Chancellor's Fellow
graham.baker@ed.ac.uk Twitter @DrGrahamBaker
Graham has a background in exercise psychology and his principle interest is in the development and evaluation of interventions to promote lifestyle physical activities. He has a particular interest in how successful interventions could be adapted for other groups such as those from ethnic minority populations and those with physical impairments.

Hayley Connell
Research Assistant
hayley.connell@ed.ac.uk
Hayley is an RA on the e-CoachER project- a randomised controlled trial investigating whether the addition of a web-based resource can enhance the outcomes of traditional exercise referral. Hayley is also completing her PhD on increasing physical activity and reducing sedentary behaviour in stroke survivors using a personalised behavioural intervention.

Thelma Dugmore
Research Secretary
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Thelma provides administrative support for the research centre. Please contact Thelma if you would like any information about PAHRC.

Andy Dalziell
PhD Student (graduated June 2016)
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Twitter @andydalziell
Andy has worked in the professional field of special educational needs for 12 years as a developmental practitioner. His PhD research explored "Better Movers and Thinkers (BMT)": An Innovative Approach to Physical Education, Physical Activity and Sport.

Dr Sam Fawkner
Senior Lecturer in Physical Activity and Health
s.fawkner@ed.ac.uk Twitter @sfawkner

Sam is a paediatric physiologist, with a focused interest on the role of growth and maturation on health and well-being and in particular on changes in physical activity behaviour during childhood and adolescence.

Dr Claire Fitzsimons
Chancellor's Fellow
claire.fitzsimons@ed.ac.uk

Claire has a background in exercise physiology and her current research fellowship focuses on sedentary behaviour, specifically how older people perceive sedentary behaviours, the health risks and testing out possible interventions.

Dr Tasneem Irshad
Research Associate
Tasneem.Irshad@ed.ac.uk

Tasneem has a background in ethnicity and health and is currently involved in an MRC funded project to develop a culturally adapted walking intervention in South Asians. Tasneem's research interests have included exploring end of life care needs in South Asians, exploring experiences of diagnostic testing for people with perceived allergic problems, the experience of cancer in South Asian children and their families and bladder control in people with MS.

Dr Paul Kelly
Lecturer in Physical Activity for Health
p.kelly@ed.ac.uk

Paul's interests are physical activity epidemiology, measurement of health behaviours, walking, cycling and active travel benefits. His current research focuses on the health benefits (physical and mental) of walking and cycling using data from large cohort studies and also RCTs

Nicky Laing
PhD Student (Funded by Paths for All)
nicky.laing@ed.ac.uk

In 2010, Nicky completed a Masters in Public Health Practice at Queen Margaret University. Since then, Nicky worked with our research group as an RA for over 2 years before embarking on a PhD that is focused on understanding determinants of walking for health in older adults.

Yvonne Laird (Funded by ESRC)
PhD Student (graduated Nov 2016)
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Yvonne has a research interest in the psychological determinants of physical activity with a particular focus on adolescent girls. Her PhD focused on the effect of social support on physical activity in this group

Susan Loh
Research Assistant
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Susan is currently working on a study funded by the Edinburgh and Lothians Health Foundation to explore the use of commercially available activity monitors to provide feedback on sedentary behaviours to stroke survivors. She is trained as a physiotherapist and has an interest in researching physical activity and exercise prescription as a treatment in medical conditions.

Dr Chloe McAdam
Research & Knowledge Exchange Coordinator
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Chloe has a background in physical activity research and has an interest in knowledge exchange and creating impact from research by working closely with policy and practice.

Dr Anne Martin
Research Assistant (project completed April 2016)
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Anne has a background in physiotherapy and nutrition and is an RA with EuroFIT conducting a systematic review on interventions to reduce sedentary behaviours.

Professor Marie Murphy
Honorary Professor, PAHRC
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Marie is Professor of Exercise and Health and leads the Centre for Physical Activity and Health Research (CPAHR) at the University of Ulster. Marie's research interests include the role of exercise, in particular walking, on health. Current research includes outcome measures ranging from the behavioural to the biochemical and she embraces a multidisciplinary approach to physical activity and exercise research questions.

Dr Andrew Murray
PhD Student
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Andrew is dual qualified in Sport and Exercise Medicine and General Practice and works at Fitness Assessment and Sports Injuries Centre (FASIC). He also works with the European Tour Golf, the SportScotland Institute of Sport and the Scottish Rugby Union. His PhD focusses on golf and health.

Prof Nanette Mutrie
Chair in Physical Activity for Health/Director, PAHRC
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Nanette is an exercise and sport psychologist with over 20 years of research in designing and testing interventions to help people to walk more. She has particular interest in the role of walking to promote mental health and walking for those with medical conditions.

Sarah Nicholson
Research Assistant
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Sarah is currently working on a Chief Scientist Office project: Too much sitting in extended bouts in stroke survivors: a qualitative study to inform novel interventions. Sarah is also completing her PhD on the development of a behaviour change intervention to increase physical activity after stroke.

Dr Ailsa Niven
Senior Lecturer in Physical Activity and Health
ailsa.niven@ed.ac.uk Twitter @AilsaNiven

Ailsa's background is in sport and exercise psychology and her research focuses on the psychological determinants and consequences of physical activity within a range of groups, including adolescent girls, adults and older adults.

Professor Chris Oliver
Honorary Professor, PAHRC
Chris.oliver@ed.ac.uk

Chris is an NHS Consultant Orthopaedic Trauma Surgeon at Royal Infirmary Edinburgh. His main interests are: active travel, obesity, cycling, kayaking, 20mph, development and promotion of undergraduate medical education in physical activity in UK.

Dr Victoria Palmer
Research Assistant
Victoria.Palmer@glasgow.ac.uk

Victoria has an interest in researching physical activity and sedentary behaviour using qualitative and mixed methods approaches. Her previous research drew on the large body of physical activity research from the sport and exercise sciences, as well as sociological theory to capture negotiations of physical activity in three generational families. She is currently working as an RA with the Seniors USP project conducting qualitative interviews with older adults about sedentary behaviour.

Dr Dave Saunders
Senior Lecturer in Exercise Physiology
dave.saunders@ed.ac.uk

Dave is an exercise physiologist and leader of the BSc Applied Sport Science degree at Edinburgh. His research involves use of systematic review methodologies to examine the role of exercise in patient groups, particularly stroke.

Divya Sivaramakrishnan
PhD Student
Divya.sivaramakrishnan@ed.ac.uk

Divya's PhD topic is evaluating the health benefits of incorporating yoga into the physical activity plan of older adults. Divya's research interests are physical activity promotion, implementation of interventions and adherence, evaluation of physical activity regimes across the life span, studying the effects of physical activity on chronic diseases and understanding the effects of yoga.

Tessa Strain
PhD Student
Tessa.strain.ed.ac.uk>

Tessa has an MSc in exercise physiology and has experience working with large datasets. She is currently undertaking a PhD using Scottish Health Survey data to explore the physical activity behaviours of adults in Scotland.

Kieran Turner
Researcher
kieran.turner26@googlemail.com

Kieran has an interest in how transport policies and the environment can influence physical activity behaviour. Since graduating from the MSc in Physical Activity for Health in 2015, he has been working on a qualitative project investigating the perceptions of key informants of 20mph speed limits in Edinburgh and contributed to the formation of an NIHR grant proposal to evaluate the health benefits of 20mph speed limits being implemented in Edinburgh.

Helen Weavers
PhD Student
H.M.Weavers@dundee.ac.uk

Helen's PhD focuses on the effect of a resistance training on physical activity in youths. In particular she is interested in the impact of resistance training on fundamental movement skills, 'the self' and weight status which, in turn, may have a positive effect on physical activity levels.

7. Projects and Grants

In 2016 PAHRC has collaborated in 14 projects with associated research grants.

1. Paths for All PhD studentship: Walking for health in older adults
PI – Niven (Co-I Fawkner)
01/10/13 – 30/09/19
Total Award to UoE - £45,000. Total to MHSE, UoE, £45,000. Funded by Paths for All.

2. Seniors USP (Understanding Sedentary Patterns)
Led by Skelton, Glasgow Caledonian University. (Co-Is Mutrie and Fitzsimons)
01/05/14 – 30/04/17
Total Award to UoE - £383, 355. Total to MHSE, UoE - £70,666. Funded by MRC

3. Social innovation to improve physical activity and sedentary behaviour through elite European football clubs: European Fans in Training (Euro-FIT)
Led by Wyke, University of Glasgow. (Co-I Mutrie) 01/11/13 – 30/10/18
Total Award to UoE - £144, 739. Total to MHSE, UoE - £110,444. Funded by European Commission FP7

4. A pilot study of the feasibility and patient-related outcomes of performing a walking intervention in patients undergoing treatment for rectal cancer: The Rex Trial
Led by Moug, Royal Alexandria Hospital. (Co-I Mutrie)
01/02/14 – 31/01/16
Total Award to UoE - £9,120. Total to MHSE, UoE - £7,296. Funded by CSO

5. Development of a culturally adapted walking intervention for South Asian adults in Scotland PI -Baker (Co-Is - Mutrie, Niven & Sheikh) 1/09/15 - 28/02/17
Total Award to UoE - £170, 548, Total to MHSE, UoE - £136,438, Funded by MRC PHIND

6. LivingWell: a feasibility study to assess the impact of a lifestyle intervention in people attending family history clinics with an increased risk of colorectal and breast cancer
Led by Anderson, University of Dundee (Co-I Mutrie)
1/05/15 - 31/10/16
Total to UoE - £1,411. Total to MHSE, UoE - £1,411. Funded by CSO.

7. Long-term weight loss trajectories in participants in a randomised controlled trial of a weight management and healthy lifestyle programme for men delivered through professional football clubs: the Football Fans in Training follow up
Led by Gray, University of Glasgow (Co-I Mutrie.
1/01/15 - 31/01/17
Total to UoE - £2,230. Total to MHSE, UoE - £2,230. Funded by NIHR

8. The M74 study: longitudinal follow-up of the health effects of a new urban motorway
Led by Ogilvie, University of Cambridge. (Co-I Mutrie)
1/01/13 - 31/01/17
Total to UoE - £26,011. Total to MHSE, UoE - £26,011- Funded by NIHR PHR

9. e-CoachER: A multi-centred RCT of an augmented exercise referral scheme using web-based behavioural support in individuals with metabolic, musculo-skeletal and mental health conditions
Led by Taylor, University of Plymouth (Co-I Mutrie)
01/01/15 - 31/01/18
Total to UoE - £202, 425. Total to MHSE, UoE- £161,940. Funded by NIHR HTA

10. Too much sitting in extended bouts in stroke survivors: a qualitative study to inform novel interventions
PI – Fitzsimons (Co-I Mutrie)
01/06/15 - 31/03/17
Total to UoE - £225, 367. Total to MHSE, UoE - £170,928. Funded by CSO

11. Physical activity in medical curriculum: a flipped classroom approach
Co-PI – Fawkner (Co-Is: Gasevic, Kelly, Oliver)
01/06/16 – 31/08/18
Total to MHSE - £5,000. Funded by UoE

12. A feasibility study to identify an effective method to provide feedback and remote monitoring on sedentary behaviour in stroke survivors
PI – Fitzsimons (CoI Mutrie)
01/04/16 – 31/08/17
Total to UoE - £40,001. Total to MHSE, UoE - £40,001. Funded by Edinburgh and Lothians Health Foundation (ELHF)

13. A randomised control trial to assess the impact of a lifestyle intervention (ActWELL) in women attending NHS breast screening clinics
01/01/17 – 31/12/19 Total to UoE - £34,664. Total to MHSE, UoE - £34,664. Funded by Scottish Government

14. Guidance on the best investments for physical activity in Dumfries and Galloway modelled on Global Best Investments paper but informed by local level evidence
PI Kelly (Co-I McAdam)
01/08/16 – 31/12/16
Total to UoE - £5,000, Total to MHSE UoE - £5,000. Funded by NHS Dumfries and Galloway)

8. Research and Knowledge Exchange Outputs for 2016

8.1 Publications

These are a mixture of high impact, peer-reviewed publications, advocacy pieces, editorials, blogs and theses. All available on Edinburgh Research Explorer

1. **Martin, A**., Booth, J., Young, D., Revie, M., Boyter, A., Johnston, B., Tomporowski, P. D. & Reilly, J. J. (2016) 'Associations between obesity and cognition in the pre-school years'. *Obesity*. 24, 1

2. Costa, R., Rhiannon, S., Camoes-Costa, V., Volker, S. & **Murray, A.** (2016) 'The impact of gastrointestinal symptoms and dermatological injuries on nutritional intake and hydration status during ultramarathon events'. Sports Medicine. 14 p.

3. Oliveira, N., **Saunders, D**. & Sanders, R. (2016). 'Fatigue induced changes in eggbeater kick kinematics affect performance and risk of injury'. International Journal of Sports Physiology and Performance

4. **Murray, A**., Calderwood, C., O'Connor, N. & **Mutrie, N**. 18 (2016). 'Scotland's progress in putting policy about physical activity into practice'. British Journal of Sports Medicine.

5. Metcalfe, R. S., **Fawkner, S**. & Vollaard, N. B. J. (2016). 'No acute effect of reduced-exertion high intensity interval training on insulin sensitivity'. International Journal of Sports Medicine. p. 1-15 15 p.

6. **Oliver, C. W., Murray, A.** & Scott, H. (2016). 'A picture IS worth a thousand words: Why healthcare professionals should know (and care) about infographics'. British Journal of Sports Medicine Blog

7. **Kelly, P., Fitzsimons, C. & Baker, G**. (2016). 'Should we reframe how we think about physical activity and sedentary behaviour measurement? Validity and reliability reconsidered.' International Journal of Behavioral Nutrition and Physical Activity.

8. **Saunders, D**., Sanderson, M. F., Hayes, S., Kilrane, M., A Greig, C., Brazzelli, M. & Mead, G. (2016). 'Physical fitness training for stroke patients'. Cochrane database of systematic reviews. 3, CD003316

9. Dickenson, E., Ahmed, I., Fernandez, M., O'Connor, P., Robinson, P., Campbell, R., **Murray, A.**, Warner, M., Hutchinson, C., Hawkes, R. & Griffin, D. (2016). 'Professional golfers' hips: Prevalence and predictors of hip pain with clinical and MR examinations'. British Journal of Sports Medicine.

10. **Oliver, C. W**. (2016). 'An unlikely candidate, a year as Professor of Physical Activity for Health'. British Journal of Sports Medicine Blog, p. 1

11. **Murray, A**., Daines, L., Archibald, D., Hawkes, R., Grant, M. & **Mutrie, N**. (2016). 'The relationship and effects of golf on physical and mental health: A scoping review protocol'. British Journal of Sports Medicine. 50, 11, p. 647-650

12. Hawkes, R., Malik, O. & **Murray, A**. (2016). 'Golf: A matter of life and death, health and happiness, or just Olympic medals? British Journal of Sports Medicine. 50, 11, p. 637=638

13. **Saunders, D**. & 40 others (2016). 'Consensus on Exercise Reporting Template (CERT): A modified Delphi study.' Journal of the American Physical Therapy Association.

14. Tainio, M., de Nazelle, A., Götschi, T., Kahlmeier, S., Rojas-Rueda, D., Nieuwenhuijse, M. J., Sa, T. H., **Kelly, P**. & Woodcock, (2016). 'Can air pollution negate the health benefits of cycling and walking?' Preventive Medicine. 87, p. 233-236

15. **Strain, T., Fitzsimons, C.**, Foster, C. E., **Mutrie, N**., Townsend, N. & **Kelly, P**. (2016). 'Age-related comparisons by sex in the domains of aerobic physical activity for adults in Scotland.' Preventive Medicine. 3, p. 90-97

16. Scott, H., **Fawkner, S., Oliver, C. W. & Murray, A**. (2016). 'Why healthcare professionals should know a little about infographics.' British Journal of Sports Medicine.

17. **Dalziell, A**. (2016). 'Exploration of an innovative approach to physical education (better movers and thinkers) on children's coordination and cognition' https://www.era.lib.ed.ac.uk/handle/1842/20997

18. **Oliver, C. W**. (ed.) (2016). 'Oxford Textbook of Fundamentals of Surgery'. Oxford University Press. 848 p. ((Oxford Textbooks in Surgery)

19. Matthews, L., Mitchell, F., Stalker, K., McConnachie, A., Murray, H. M., Melling, C., **Mutrie, N**. & Melville, C. A. (2016). 'Process evaluation of the Walk Well study: A cluster-randomised controlled trial of a community based walking programme for adults with intellectual disabilities' BMC Public Health.

20. **Martin, A., Mutrie, N**. , Wyke, S. & 36 others (2016). 'Study protocol of European Fans in Training (EuroFIT): A four-country randomised controlled trial of a lifestyle program for men delivered in elite football clubs'. BMC Public Health. 16, 1, 598

21. Sallis, J., Bull, F., Guthold, R., Heath, G., Inoue, S., **Kelly, P**., Oyeyemi, A. L., Perez, L., Richards, J. & Hallal, P. C. (2016). 'Progress in physical activity over the Olympic Quadrennium'. The Lancet.

22. Such, E. & **Mutrie, N**. (2016). 'Using organisational cultural theory to understand workplace interventions to reduce sedentary time'. International Journal of Health Promotion and Education.

23. Hubbard, G., Munro, J., O'Carroll, R. E., **Mutrie, N**., Kidd, L., Haw, S., Adams, R., Watson, A. J. M., Leslie, S. J., Rauchaus, P., Campbell, A., Mason, H., Manoukian, S., Sweetman, G. & Treweek, S. (2016). 'The use of cardiac rehabilitation services to aid the recovery of patients with bowel cancer: A pilot randomised controlled trial with embedded feasibility study'. Health Services and Delivery Research. 4, 24

24. **Martin, A**., Boyle, J., Corlett, F., **Kelly, P**. & Reilly, J. (2016). 'Contribution of walking to school to individual and population moderate-vigorous intensity physical activity: Systematic review and meta-analysis'. Pediatric Exercise Science. p. 353 -363 10 p., 28

25. **Saunders, D**., Sanderson, M., Hayes, S., Kilrane, M., Greig, C. A., Brazzelli, M. & Mead, G. (2016). 'Physical Fitness Training for Patients With Stroke' Stroke. 47, p. e219-e220

26. Conway, E., Wyke, S., Sugden, J., **Mutrie, N**. & Anderson, A. S. (2016). 'Can a lifestyle intervention be offered through NHS breast cancer screening? Challenges and opportunities identified in a qualitative study of women attending screening'. BMC Public Health. 16, 758

27. Hubbard, G., O'Carroll, R., Munro, J., **Mutrie, N**., Haw, S., Mason, H. & Treweek, S. (2016). 'The feasibility and acceptability of trial procedures for a pragmatic randomised controlled trial of a structured physical activity intervention for people diagnosed with colorectal cancer: Findings from a pilot trial of cardiac rehabilitation versus usual care (no rehabilitation) with an embedded qualitative study'. Pilot and Feasibility Studies. 2, 51

28. **Saunders, D**., van Wijck, F., Townley, B., Skelton, D. A**., Fitzsimons, C.** & Mead, G. (2016). 'The BASES expert statement on fitness, physical activity and exercise after stroke'. The Sport and Exercise Scientist.

29. Lubans, D., Richards, J., Hillman, C., Faulkner, G., Beauchamp, M., Nilsson, M., **Kelly, P**., Smith, J., Raine, L. & Biddle, S. (2016). 'Physical activity for cognitive and mental health in youth: A systematic review of mechanisms'. Pediatrics.

30. MacDonald, M., **Fawkner, S. & Niven, A**. (2016). 'How much walking should be advocated for good health in adolescent girls?' Journal of Physical Activity and Health. 1 p.

31. Wahid, A. A., Manek, N., Nicols, M., **Kelly, P.,** Webster, P., Kaur, A., Friedemann, C., Wilkins, E., Rayner, M., Roberts, N. & Scarborough, P. (2016). 'Quantifying the association between physical activity and cardiovascular disease & diabetes: a systematic review and meta-analysis.' Journal of the American Heart Association.

32. Chiu, C-Y., Pease, D. L., **Fawkner, S**. & Sanders, R. H. (2016). 'Validation of Body Volume Acquisition by Using Elliptical Zone Method.' International Journal of Sports Medicine.

33. Williamson, W., Foster, C. E., Reid, H., **Kelly, P.,** Lewandowski, A. J., Boardman, H., Roberts, N., McCartney, D., Huckstep, O., Newton, J. L., Dawes, H., Gerry, S. & Leeson, P. (2016). 'Will Exercise Advice Be Sufficient for Treatment of Young Adults With Prehypertension and Hypertension? A Systematic Review and Meta-Analysis.' Hypertension. 68, 1, p. 78-87

34. Thomas, D., Quinn, M. A., **Saunders, D**. & Greig, C. A. (2016). 'Protein Supplementation Does Not Significantly Augment the Effects of Resistance Exercise Training in Older Adults: A Systematic Review.' Journal of the American Medical Directors Association. 17, 10, p. 959.e1-959.e9

35. **Murray, A**., Daines, L., Archibald, D., Hawkes, R., Schiphorst, C., **Kelly, P**., Grant, M. & **Mutrie, N.** (2016). 'The relationships between golf and health: a scoping review.' British Journal of Sports Medicine.

36. **Murray, A**., Daines, L., Archibald, D., Hawkes, R., Schiphorst, C., **Kelly, P**., Grant, M. & **Mutrie, N**. (2016). 'Infographic. Golf and health.' British Journal of Sports Medicine.

37. **Mutrie, N. & Baker, G**. (2016). 'Physical activity can successfully be promoted to older adults within a primary care setting by trained nurses.' Evidence Based Nursing. 20, 1, p. 22 1 p.

38. Osborne, S., Adams, J., **Fawkner, S., Kelly, P., Murray, A. & Oliver, C. W**. (2016). Tomorrow's doctors want more teaching and training on physical activity for health.' British Journal of Sports Medicine.

39. **Strain, T., Fitzsimons, C., Kelly, P. & Mutrie, N**. (2016). 'The forgotten guidelines: cross-sectional analysis of participation in muscle strengthening and balance & co-ordination activities by adults and older adults in Scotland.' BMC Public Health. 1108

40. Scott, H., Adams, J., Osborne, S., Jenkins, E., **Oliver, C. W., Baker, G., Mutrie, N., Kelly, P. & Fawkner, S**. (2016). Infographic: Tomorrow's doctors want more teaching & training on physical activity for health.' British Journal of Sports Medicine.

41. **Oliver, C. W**. (2016). 'Dr Bike's Healthy Prescription' Cycle Friendly Scotland

42. **Laird, Y.** (2016). 'The effect of social support on physical activity in adolescent girls' PhD Thesis. https://www.era.lib.ed.ac.uk/handle/1842/21051

43. **Oliver, C. W**., Buchan, M. & Hilton, J. (2016). 'MOOCs: Marvellous or moot for exercise medicine and physical activity?' British Journal of Sports Medicine Blog, 1, p. 1

44. Oja, P., **Kelly, P**., Pedisic, Z., Titze, S., Bauman, A., Foster, C. E., Hamer, M., Hillsdon, M. & Stamatakis, E. (2016). 'Associations of specific types of sports and exercise with all-cause and cardiovascular-disease mortality: A cohort study of 80,306 British adults.' British Journal of Sports Medicine.

45. **Oliver, C. W.** (2016). 'Should you listen to music through earphones whilst cycling?' British Journal of Sports Medicine Blog, 1, 1, p. 1 1 p.

46. Scott, H., **Fawkner, S., Oliver, C. W. & Murray, A**. (2016). 'How to make an engaging infographic?' British Journal of Sports Medicine

8.2 Presentations

Baker

"Evidence of health benefits of physical activity", Launch of "Your go to guide on Physical Activity" NHS Greater Glasgow and Clyde event, August 2016

'Effective behavior change techniques to reduce sedentary behavior in adults: a systematic review and meta-regression.' Baker G, Martin A, Kelly P, Fitzsimons C, Niven A, Gray C, Mutrie N. 6th ISPAH International Congress on Physical Activity and Public Health, Thailand, November 2016

'Development and refinement of a programme theory for evaluating signage only 20mph speed limit projects' Baker G, Jepson R, Turner K, Kelly P, MacDonald B. 6th ISPAH International Congress on Physical Activity and Public Health, Thailand, November 2016.

Irshad

'Exploring barriers and facilitators to walking in South Asian populations: a qualitative study' Irshad T, Baker G, Mutrie N, Niven A, Sheikh A, Banday S, Bain F. Scottish Physical Activity Research Connections conference, October 2016.

'Exploring barriers and facilitators to walking in South Asian populations: a qualitative study' Irshad T, Baker G, Mutrie N, Niven A, Sheikh A, Banday S, Bain F. 9th European Public Health Conference, Austria, November 2016.

Kelly

Workshop on physical activity after breast cancer treatment. Breast Cancer Care, April 2016

"Physical activity and pregnancy: What do you need to know?" Scottish Sports and Exercise Medicine Symposium, May 2016

"Why do active children have better mental health? The mechanistic evidence". International Society for Behavioural Nutrition and Physical Activity (ISBNPA) Conference, South Africa, June 2016

"Neurobiological mechanisms responsible for the effects of physical activity and fitness on mental health in young people". International Society for Behavioural Nutrition and Physical Activity (ISBNPA) Conference, South Africa, June 2016

"Psychosocial mechanisms responsible for the effects of physical activity and fitness on mental health in young people". International Society for Behavioural Nutrition and Physical Activity (ISBNPA) Conference, South Africa, June 2016

'How can we value the economic benefits of health gains from walking and cycling projects? A discussion of the World Health Organisation's HEAT approach'. British Columbia Ministry of Health, August 2016

Laing

'WE ROAM Study – Walking Experiences: Researching Older Adult Motivations'. Paths for All walk coordinators event, July 2016.

McAdam

'eCoachER Trial in NHS GGC' (presentation on behalf of eCoachER team). Live Active Public Health Event at NHS GGC, December 2016.

Martin

"Experiences of using a novel self-monitoring device, the SitFIT, to help men sit les and walk more: Findings from a pilot trial". International Society for Behavioural Nutrition and Physical Activity (ISBNPA) Conference, South Africa, June 2016

Mutrie

Health Evidence webinar. Nanette Mutrie and Anne Martin shared the findings of the EuroFIT systematic review on interventions to reduce sedentary time in adults, April 2016

"Scotland's experience of evidence informed policy making in physical activity for health". Research into Policy to Enhance Physical Activity (REPOPA) Project, September 2016

"How big(gish) data were used to inform Scottish Physical Activity policy making". ESRC Obesity Network Seminar Series, September 2016

'Physical Activity, Mental Health and Dementia'. Sport, Mental Health and Dementia Conference, Glasgow, November 2016.

Scottish Government Health and Sport Committee: evidence presented to Committee's obesity session on 6 December.

'Psychology of physical activity intervention and outcomes'. British Psychological Society Annual Conference, December 2016, Cardiff.

Niven

"Understanding sedentary behaviour in office workers: A qualitative study using the COM-B model of behaviour". European Health Psychology/British Psychological Society Division of Health Psychology conference, August 2016

Palmer

'Understanding the role of social networks in older adults' sedentary behaviour'. Prof Nanette Mutrie, Dr Claire Fitzsimons, Dr Victoria Palmer were co-authors with colleagues from Seniors USP on an oral presentation to Mobility, Mood and Place conference, October 2016

Strain

'Domains of aerobic activity: Comparisons between countries'. 7th Annual Meeting of HEPA Europe, September 2016, Belfast.

'Adult physical activity surveillance in Scotland: Consistent monitoring despite moving goalposts'. 7th Annual Meeting of HEPA Europe, September 2016, Belfast.

'Pilot testing the 'Edinburgh Framework': Use of a novel approach to establish the validity and reliability of the Scottish Health Survey'. 7th Annual Meeting of HEPA Europe, September 2016, Belfast.

'Differences by age and gender in the total reported weekday sitting time for adults in Scotland'. Scottish Physical Activity Research Connections conference, October 2016.

Turner

Development of a programme theory for understanding the public health impact of 20mph speed limit projects. Turner, K., Baker, G., Kelly, P., MacDonald, B., Jepson, R., (2016). 7th Annual Meeting of HEPA Europe, September 2016, Belfast.

8.3 Posters

1. ‘I’m sitting here bored to tears like an … old age pensioner’: the importance of social networks in understanding sedentary behaviour in older adults. **Victoria Palmer, Claire Fitzsimons**, Sally Wyke, **Nanette Mutrie**, Cindy Gray. ISBNPA, June 2016 and Scottish Physical Activity Research Connections, October 2016

2. ‘Investigating fidelity of a community-based exercise referral scheme’ **Graham Baker and Chloe McAdam**. European Health Psychology Society and British Psychological Society Division of Health Psychology Conference, August 2016

3. ‘I’m not a couch potato’ Older adults’ construction of sedentary behaviour as a moral practice’ on behalf of the Seniors USP consortium. **Victoria Palmer**. The British Sociological Association Medical Sociology Group Annual Conference, September 2016. Awarded best poster at the conference.

4. ‘Developing a yoga intervention for older adults in Scotland’ **Divya Sivaramakrishnan, Claire Fitzsimons, Graham Baker, Nanette Mutrie**. Scottish Physical Activity Research Connections, October 2016

5. ‘Pilot study: to test the recruitment and data collection procedures for a planned walking study with older adults walking with Paths for All groups’ **Nicky Laing, Ailsa Niven, Sam Fawkner**. Scottish Physical Activity Research Connections, October 2016

6. ‘Development of a programme theory for understanding the public health impact of 20mph speed limit projects’ **Graham Baker, Paul Kelly,** Bradley MacDonald, **Kieran Turner,** Ruth Jepson. Scottish Physical Activity Research Connections, October 2016

7. ‘What do future doctors know about physical activity for health? A survey of knowledge and attitudes of medical school students at The University of Edinburgh’ **Paul Kelly, Samantha Fawkner**, Scott Osborne, Jake Adams, Evan Jenkins, Hilary Scott, **Christopher W Oliver, Andrew Murray, Graham Baker, Nanette Mutrie.** Scottish Physical Activity Research Connections, October 2016

8. ‘Sedentary behaviours during pregnancy: A systematic review. **Caterina Fazzi, Dave Saunders,** Kathryn Linton, Jane Norman, Rebecca Reynolds. Scottish Physical Activity Research Connections, October 2016

9. ‘The feasibility of delivering a physical activity intervention for adults within routine diabetes care’ L Matthews, M McCallum, A Kirk, **Nanette Mutrie**, A Gold, A Keen. Scottish Physical Activity Research Connections, October 2016

10. ‘Affective Responses During and After Reduced Volume High-Intensity Interval Exercise’ Shaun M. Phillips, Jacqueline Thow, Jack Holroyd, Anthony P. Turner, and **Ailsa Niven.** Scottish Physical Activity Research Connections, October 2016

11. ‘Too much sitting in extended bouts in stroke survivors: a qualitative study to inform novel interventions’ **Sarah Nicholson, Ailsa Niven,** J Morris, S Chastin, G Mead, **Claire Fitzsimons**. Scottish Physical Activity Research Connections, October 2016

12. ‘Physical activity levels of University of Edinburgh students’ Helen Ryall, **Graham Baker**. Scottish Physical Activity Research Connections, October 2016

13. ‘Investigating fidelity of a MacDonald, **Ailsa Niven, Claire Fitzsimons.** Scottish Physical Activity Research Connections, October 2016

community-based exercise referral scheme’ Ivana Oracova, **Chloe McAdam, Graham Baker**, Diane Dixon. Scottish Physical Activity Research Connections, October 2016

14. ‘The challenges of recruiting sub-groups within hard-to-reach populations for research studies’ **Baker G, Irshad T, Mutrie N, Niven A**, Sheikh A, Banday S, Bain F. 6th ISPAH International Congress on Physical Activity and Public Health, Thailand, November 2016

15. ‘Understanding sedentary behaviour in office workers: A qualitative study using the COM-B model of behaviour’ Brad MacDonald, **Ailsa Niven, Claire Fitzsimons.** Scottish Physical Activity Research Connections, October 2016

9. PAHRC Seminars

We have hosted a wide range of external speakers during our weekly Wednesday seminars at PAHRC:

1. Erin Hoare (Deakin University): ‘Depressive symptomatology and obesogenic risk behaviours: findings of the Australian Capital Territory It’s Your Move project’ (Feb 2016)

2. Workshop on press coverage: Edd McCracken (Press Officer, College of Humanities and Social Science) (January 2016)

3. Dr Joe Inchley (University of St Andrews): 'International perspectives on adolescent physical activity and health: findings from the Health Behaviour in School-aged Children (HBSC) study' (Feb 2016)

4. Ann Gates (Exercise Works Ltd) 'Movement as medicine: what does this mean for our future and current health care professionals?' (Feb 2016)

5. Professor Sylvia Titze (University of Graz) (Visiting Scholar): 'Personal, past and present experiences with pragmatic evaluation in physical activity' (March 2016)

6. Dr Sinead Currie (Stirling University) 'Pregnancy: a time to sit down and put your feet up? Investigating antenatal physical activity' (March 2016)

7. Dr Anne Martin 'Experiences of using a novel self-monitoring device, the SitFIT, to help men sit less and walk more: Findings from a pilot trial' (March 2016)

8. Kirsty Baird (SPA Programme Officer) 'Support for Physical Activity (SPA) Programme: Impact Report (April 2016)

9. Hayley Connell (RA/PhD Student) 'Increasing physical activity and reducing sedentary behaviour in stroke survivors' (April 2016)

10. Caterina Fazzi Gomez (PhD Student) 'Sedentary behaviour during pregnancy: a systematic review (May 2016)

11. Dr Craig Melville (University of Glasgow)/Dr Fiona Mitchell (University of Strathclyde): 'A walking intervention for adults with intellectual disabilities' (June 2016)

12. Professor Mike Kelly (Institute of Public Health, University of Cambridge): 'In the shadow of cholera: why public health took so long to recognize the importance of physical activity' (June 2016)

Prof Mike Kelly

13. Dr Ruth Jepson/Stephen Malden/Dr Larry Doi (Scottish Collaboration for Public Health Research and Policy (SCPHRP)), June 2016

14. Dr Paul Kelly (PAHRC): 'Age and sex related differences in PA domain profiles in Scottish adults' (Sept 2016)

15. Kieran Turner: 'Development of a programme theory for understanding the public health impact of 20mph speed limit projects' (Sept 2016)

16. Ewa Lipinski/Divya Sivaramakrishnan: Pure Impact Training Workshop (Oct 2016)

17. Special PAHRC Seminar: 3 Top Tips: Prof Catherine Woods (University of Limerick): '3 top tips for building research collaborations'; Prof Adrian Bauman (Sydney School of Public Health): '3 top tips for making your research policy relevant'; Ann Gates (Founder of Exercise Works!): '3 top tips for mass media health promotions and why Twitter works' (Oct 2016)

Prof Catherine Woods

18. Tessa Strain (PhD Student): Experience of Internship at Scottish Government (Nov 2016)

19. Prof Paul Wright (Northern Illinois University): 'When the rubber hits the road: supporting community-based organisations in developing and evaluating pa and health promotion programs' (Nov 2016)

20. Dr Claire Fitzsimons, Dr Dave Saunders, Dr Susan Loh and Sarah Nicholson: 'Sedentary behaviour after stroke' (Nov 2016)

21. Lorraine Close: 'Promoting health and wellbeing of NHS staff: Could yoga be part of the solution?' (Dec 2016)

22. Dr Ailsa Niven and Dr Shaun Philips: 'High Intensity Interval Training: A fast track to better health?' (Dec 2016)

10. Media Coverage

Members of PAHRC and their research are often highlighted in the media. Listed below are some of the activities for 2016 which have caught the media's attention:

In February, we contacted the College press team after the publication of our paper that showed the occupational activity, domestic activity, and walking make up the majority of physical activity undertaken by adults in Scotland (*Strain, Fitzsimons, Foster, Mutrie and Kelly (2016). Age-related comparisons by sex in the domains of aerobic physical activity for adults in Scotland. Prev Med Reports 3:90-97*"). The resultant press release was picked up by all the major news sites (The Courier, The Herald, STV) and The Times and The Scottish Daily Mail followed up for further information before covering the story.
The reference for the paper is

'Sugar Tax' BBC Radio Scotland Call Kaye. Professor Chris Oliver took part in radio discussion. http://www.bbc.co.uk/programmes/b072jh1j

In 2014 Dr Paul Kelly led a meta-analysis on reduction in risk for all-cause mortality http://ijbnpa.biomedcentral.com/articles/10.1186/s12966-014-0132-x For this new paper the risks in the individual studies were adjusted for nationally appropriate levels of pollution to separate the harms of pollution from the benefits of walking or cycling. Paul Kelly then re-ran the meta-analyses for walking and cycling to generate new relative risks that were "adjusted" for harms of air pollution. These new relative risks were used by the team in Cambridge as a basis for their calculations and models. This research received widespread media coverage and the following are just a few of the media outlets which covered the data:

BBC Online. Air pollution: Benefits of cycling and walking outweigh harms – study http://www.bbc.co.uk/news/health-36208003
Guardian. Benefits of cycling and walking 'outweigh air pollution risk' in cities http://www.theguardian.com/environment/2016/may/05/benefits-cycling-walking-outweigh-air-pollution-risk-cities
Times (£) Never mind the pollution, cycling is still good for you http://www.thetimes.co.uk/article/never-mind-the-pollution-cycling-is-still-good-for-you-502wj3nx8
Buzzfeed. Cycling In London Is Always Good For You, Despite The Pollution, Research Claims https://www.buzzfeed.com/tomchivers/get-on-your-bikes-and-ride
Daily Mail. Why walking is good for you... even in the smog: Health benefits of a stroll found to outweigh harm caused by chemicals and dust pumped out by traffic http://www.dailymail.co.uk/news/article-3574260/Why-walking-good-smog.html

BBC Radio Scotland - Prof Chris Oliver discusses - Physical activity in children and young people, is too much exercise dangerous?

BBC One Scotland Investigates: Prof Nanette Mutrie and Prof Chris Oliver feature in "The Medal Myth"

The following paper received wide press coverage in November including participation by Tessa Strain, PhD student in Radio Scotland John Beattie Show and Kaye Adams Show: 'The forgotten guidelines: cross-sectional analysis of participation in muscle strengthening and balance & co-ordination activities by adults and older adults in Scotland' Strain, T., Fitzsimons, C., Kelly, P. & Mutrie, N.

11. Local, National and International Policy Making

Part of our work as academics is advocacy and trying to inform policy and practice and support the use of best available evidence. We are involved in a number of activities in this area in Scotland, UK and globally:

- Contributed to CMO Physical Activity Infographics
- Led development of Physical Activity Country Card for Scotland
- Member of National Strategic Oversight Group for Physical Activity at Scottish Government
- Member of Health and Social Care Delivery Group at Scottish Government
- Active Scotland Outcome and monitoring framework
- Provided advice to Scottish Government on content, sampling and analysis of Scottish Health Survey and Scottish Household Survey
- Gave written and oral evidence to Scottish Government's Review of Scotland's Obesity Route Map
- Contributed to Scottish National Walking Strategy and Action plan
- Completed advisory work and consultancy for WHO and WHO HEPA Europe
- Member of Steering Committee for Golf for Health Project, World Golfing Federation
- Member of NHS Health Scotland Physical Activity Special Interest Group

12. Other Activities

Many of our team are active members of professional bodies (e.g. British Association of Sport and Exercise Scientists (BASES), British Psychological Society (BPS) and The International Society for the Advancement of Kinanthropometry (ISAK)).

We continue to participate in the wider research community by reviewing journal articles, examining PhD theses and participating in networking and career development events.

13. Conclusion

We hope you have enjoyed reading our 2016 Annual Report. If you would like further information on any of the topics covered please contact us at pahrc@ed.ac.uk.

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