



ANNUAL REPORT 2018

 **ACER**

AGEING CLINICAL AND EXPERIMENTAL RESEARCH

Ageing Clinical and Experimental
Research Team
Department of Medicine for the Elderly



Message from **Dr. Roy Soiza**



ACER's Annual Report intends to showcase our team's work and efforts throughout the past year. We hope it will be both engaging and informative to anyone with an interest in ageing research, academic medicine and/or clinical geriatrics in Aberdeen.

The Report includes a list of who we are, what we aspire to achieve and how we are going about doing it. We have brief overviews of our main research projects and list all our most recent grant awards, conference presentations and publications. Despite another challenging year for health services, we once again had much to celebrate in 2018.

We are pleased to highlight the many successes of the members of our team, especially that of our rising stars of the future. Maximising everyone's health and well-being as we age is one of the greatest challenges of the 21st century and we are pleased to play our part, however small, through innovation and investigation.

As the report will undoubtedly show, the frontier between what we know and what we do not yet know is a very exciting and rewarding place to be. We hope more people will feel as enthused as we are, and want to join us in whatever capacity they can. None of our work would be possible without our amazing volunteers, research participants, their family and carers, academic researchers, clinicians, ancillary staff, our students and funders. As ever, we take the opportunity to thank the many people who already help make ACER such a success. We hope to attract more as we strive to improve the care and experience of those living in old age through research. Be sure to check out the ACER website for updates and do not hesitate to get in touch if you want to find out more.

Dr. Roy Soiza
Senior Clinical Lecturer



Acknowledgements

We gratefully acknowledge the contribution of our team members and students to the various research activities during 2018. We also like to thank our external affiliates, collaborators and visitors during the year who have collaborated with us throughout the year. We also thank the administrative and supporting staff from the University of Aberdeen, School of Medicine, Medical Sciences and Nutrition.

Special thanks to Dr Kathryn Martin from Epidemiology Group (co-supervisor of Selva's PhD), Dr David McLernon from Medical Statistics Group (co-supervisor of Michelle's PhD), Professor Christine Bond, Dr Moira Cruikshank and Dr Rumana Newlands (co-supervisors of Toney's PhD work), Professor Alison Murray (primary supervisor) and Dr Christopher McNeal (co-supervisor of Mina's PhD thesis), and Professor Maw Pin Tan (primary supervisor of Melissa's thesis).

We thank our funders for their support.



Professor Phyo K. Myint

Lead Academic

Looking back at 2018

This year saw expansion in ACER research activities as well as research facilities. ACER Research Hub office space facilities have been increased to additional desk spaces and computers in both 1.129 (previously used as team meeting room) and adjacent 1.128 giving a total of 12 working desks with at least 2 monitor screens with 2 desk spaces with 3 monitor screens for the team. Dr Roy Soiza, Honorary Senior Lecturer and co-lead of ACER) is now based in Room 1.128, which is great for the junior team members and students. We also have a dedicated meeting room next to the ACER offices.

As usual, we had another great summer with several scholarship summer students and volunteer research students. Thanks to Geriatrics Research endowment funds, we were able to award scholarships to two students: Leslie Wilson Aberdeen Summer Research Scholarship (ASRS) to Rahman (Abdel Rahman Abdel-Fattah) and Gwen Seymour ASRS Scholarship to Yuen (Phui Yuen Wong). We also congratulate Tiberiu Pana and Samuel Neal for being successful with a Medical Research Scotland vacation awards and Genevieve Marsh-Feiley for her Flora-Gow Murray Endowed scholarship. Other scholarship students who worked with us this summer included Kaisa Yrjana (HotStart), Weronika Szlachetka and Katriona Hutchison (IAHS funded ASRS scholarships), Zahra Pasdar (CRANES future leader award) and Annes Ahmeidat (AZF Giles Scholarship). It was also great to see the successful publications of Andrew Ablett whose tireless work over the last three years has paid off.

We also had funding success in collaboration with Professor Dana Dawson and Dr Sohinee Bhattacharya to carry out the CAPE study (Cardiovascular Assessment in women with Pre-eclampsia) funded by the Tenovus Scotland for our Clinical Academic Trainee (CT1) David Gamble. We were also successful with a Dunhill Medical Trust grant to carry out a series of systematic reviews around anticholinergic burden and health outcomes in collaboration with the Universities of Glasgow and East Anglia. We are delighted with the appointment of Dr Carrie Stewart as the Research Fellow for this work.

There was a lot of media interest in our work throughout 2018 in a number of areas as detailed in the press release section.



We Welcome



Dr. Carrie Stewart Dunhill Medical Trust Research Fellow

Carrie joined ACER in her new role as Dunhill Medical Trust Research Fellow in September 2018 to carry out a series of systematic reviews on anticholinergic burden and clinically important outcomes.

Carrie's research has always focused around older adults' health. Her early research surrounded pain management and her PhD thesis focused on developing a better understanding of the concept older adults' pain self-management. She has since explored pain management in acute care settings, and developed new interests and experience in different methodologies in the fields of dementia, stroke and anti-cholinergic burden. She has experience in qualitative interviewing, quantitative surveys, systematic reviews, and clinical trials.



Dr. Isobel Sleeman

Izzy moved back to Aberdeen from Newcastle to join the Specialty Training Programme in Geriatrics and General Internal Medicine in August 2018. Her clinical and research interest is in Parkinson's disease and she has been appointed as an Honorary Clinical Lecturer post

with the view of taking up SCRED Clinical Lecture role in the future. She plans to focus her research in nutrition related and epidemiological work around PD in collaboration with Scientists from the Rowett Institute of Nutrition and Health (RINH) and using existing available data sources locally, nationally and internationally.

Visitor



Prof. Hamid Baradaran

Professor Baradaran is Professor of Clinical Epidemiology from Iran University of Medical Sciences. He visited Aberdeen between September and December 2018. We hope we made a good impression and we were delighted to have an opportunity to work with him.

His research interests closely align with ACER and his visit was a positive addition to our existing international network of research collaborators.

Awards & Grants

Zarah Pasdar

Congratulations to Zahra Pasdar (co-supervised by Sohinee, David and Phyo) who won one of the ASRS Prizes (award money £150 plus transcript) this year at the scholarship symposium in November 2018 with the project entitled "Hypertensive disorders of pregnancy and the risk of common cancers; Evidence from the EPIC-Norfolk prospective population-based study"

Tiberiu Pana and Raphae Barlas

For their travel grant award (300€ each) for top 100 presentations submitted to the European Stroke Conference in Athens.

Andrew Ablett

For his Elizabeth Lockhart Prize for his Philosophy Humanity Project.

Mina Khezrian

Received £3,000 award from Robin Ezra Scholarship Trust in support of her PhD research.

Alison Donaldson (in collaboration with Angus Macleod and George Ramsay)

Received £7,500 from ACAT for body composition project.

David Gamble

Cape-Study funded by Tenovus ~ £20,000.

Phyo Myint et al.**ACB Systematic Reviews**

Received £96,015 from the Dunhill Medical Trust.

CATHETER II Trial

Received £2.27 Million over 4.5 years (18 applicants, Chief Investigator Professor Abdel-Fattah) from the Health Technology Assessment programme.

Completed Trials In 2018



The SENATOR project, which started in October 2012, was successfully completed during 2018. Our ACER team was part of an international, multi-disciplinary consortium funded by the European Union. The team developed and trialled a novel software engine to optimise pharmacological and non-pharmacological drug therapy in older people with multi-morbidity.

At the time of writing, the main trial manuscript is being submitted to a top journal, so the results remain embargoed. However, the consortium has already published and presented around 20 original papers, with more planned throughout 2019 (and probably beyond). The project shed new insights into the efficacy of non-pharmacological therapies for many of the commonest conditions of old age. It also revealed that adverse drug reactions in hospital are far more common than previously thought, affecting a quarter of all older multi-morbid people in hospital. Our team has built some fantastic relationships with many of the top academic geriatricians in Europe, which we will continue to foster.

SERVED-Memory Trial: The trial was run through the Norfolk and Norwich University Hospital (NNUH) R & D Department who acted as trial sponsor. The trial was registered with the Eastern Region CRN and follow up was undertaken through the local CTU.

Memory impairment and decline after stroke are common and potentially preventable. The SERVED Memory trial tested the potential to enrol patients following a recent stroke or mini-stroke (TIA) who had mild memory problems into a trial where the study team would regularly (3 monthly) review them and request their GPs to try and control their risk factors to current UK guidelines values (best practice) for the prevention of further strokes and memory loss over 12 months (Intervention group). A similar subject group was studied who only saw their GPs but were assessed by the study team at the beginning and end of the 12-month study period (Control group). Which group the patients went into was selected by chance. The aim was to see if patients were happy being seen regularly in a hospital clinic and if regular reminding of their GPs and the patients about what their various risk factors were and the ideal values they should be, would improve overall risk factor management and reduce the risk of further memory impairment. A third group of stroke /TIA patients without memory impairment at baseline was observed over 12 months to assess if their memory changed over time (Observational group). The vascular risk factors studied included blood pressure (BP), blood fat levels, diabetic control and blood thinning tablet use.

Results indicated that recruitment was slow but possible, although retention of subjects was problematic, less than half of those in the Intervention group were still enrolled at 12 months mainly because they did not like attending hospital-based follow-up clinics, this was especially true for the frailer subjects. The GPs, even when regularly reminded, were not controlling stroke and memory risk factors to ideal levels. We did not collect data as to why this was not occurring. There was little change in memory in the Control and Interventions groups over 12 months however, but the Observational group did show a decrease in memory function at follow-up. Based on these findings a large trial using a similar design would not be feasible but there is obvious need to improve risk factor management study in this vulnerable patient group.

K-SWAY

Vitamin K deficiency is common in older people and is strongly associated with increased cardiovascular risk, osteoporosis and fragility fractures. This helped highlight that, beyond its well-known role in blood clotting, vitamin K acts a co-enzyme for many essential physiological processes in vascular and bone health. Along with colleagues from Dundee and Fife, we undertook the world's first randomised controlled trial of vitamin K supplementation in older people with a history of falls. With the help of Amanda Cardy of the Scottish Primary Care Research Network, we were delighted to recruit to target on time and within budget! We noted a real hunger amongst our population with falls to participate in research, especially trials of new interventions. The results of K-SWAY will be presented nationally at the BGS 2019 Spring Meeting in Cardiff and internationally at the IAGG conference in Gothenburg. We will no doubt add it to our list of publications very soon.

BiCARB

Another long-running study came to a triumphant end during 2018. The BiCARB study is a UK multi-centre study of bicarbonate supplementation in older people with chronic kidney disease and metabolic acidosis. Bicarbonate supplements are widely used by renal physicians, but their efficacy in older people is unknown. Moreover, they have potential to do harm through their high sodium load and potential to increase vascular calcification and stiffness. ACER members played a key role in study design, obtaining funding and recruitment. With the very able efforts of one of our Academic FY1s, Dr May Khei Hu, we also led on a systematic review of bicarbonate supplementation in older people. We expect the trial results to appear in a top journal in 2019.

LACE

We have now finished recruiting to the LACE trial (leucine and/or an ACE inhibitor) to treat sarcopenia in older people. The trial will remain in the follow-up phase during 2019, with results expected mid-2020.

Other Trials

RAINDrop

We were delighted to lead a new multi-centre trial of iron replacement strategies in older people with iron deficiency anaemia who do not respond well to initial treatment with oral iron supplementation. Our team has previously shown that these supplements are poorly effective in older people despite being widely used. We also discovered that there is a high degree of unjustifiable variability amongst clinicians in the management of this condition. We procured funding from the CSO for a feasibility study and have now recruited our first volunteers. The study is expected to shed light on the best recruitment methods and ensure we have all the information we need to safely and efficiently undertake a future definitive trial.

Study website: <https://raindrop.org.uk/>

CHIPPS The Care Homes Independent Pharmacist Prescribing Study (CHIPPS)

This is a 5-year, NIHR-funded research programme, which proposes that a suitable model for appropriate medicines management in care homes is a Pharmacist Independent Prescriber, who would assume responsibility for repeat prescriptions' monitoring and authorising and overall management of medicines in the care home. We are delighted that the NIHR gave us green light to continue with the full trial (end date early 2020). The summary of the progress of the trial to date can be found at CHIPPS website <https://www.uea.ac.uk/chipps/summary>

CATHETER II trial: Randomised Controlled Trial Comparing THE Clinical And Cost-Effectiveness Of Various Washout Policies Versus No Washout Policy In Preventing Catheter Associated Complications In Adults Living With LongTerm Catheters

This is another NIHR HTA study led by the Chief Investigator: Professor Mohamed Abdel-Fattach. Several catheter washouts policies are used in clinical practice for prevention and/ or management of LTC blockage. Washouts used are of different types (normal saline, acidic, antimicrobial); volumes (50 and 100mls) and frequency of administration. The recent Cochrane review (2017) assessed the best available evidence and found insufficient evidence to determine whether prophylactic catheter washout policies had a beneficial or harmful effect on any of the outcomes in patients with LTC. The authors recommended a rigorous and methodologically robust RCT to assess the clinical and cost effectiveness of washout policies in patients with LTC. The aim of the study is to determine whether the addition of a policy of prophylactic catheter washouts on a weekly basis to the current standard LTC care improves the outcome of care for people living with a LTC in the UK. In this study we will be seeking to answer the following research question "What is the clinical and cost-effectiveness, patient acceptability and satisfaction, and safety of weekly prophylactic catheter washout policies in addition to standard LTC care compared to standard LTC care only, in adults living with LTC?".

Ongoing Efforts

Research Synthesis

We have several ongoing research synthesis work. Significant focus has been on a systematic approach to better understand the development and impact of anticholinergic scales. This work is enhanced by the Dunhill Medical Trust Research Project Grant that will focus to answer key research questions to take this agenda forward.

There are also ongoing ONTOP Systematic Reviews related to the SENATOR project which are mainly in submission stage. In collaboration with other external collaborators we are also working on several ageing related reviews in the areas of Parkinson's disease, chronic kidney disease, nutrition, obesity and falls.

Public Health Research

We continue to collaborate with several cohort studies including EPIC-Norfolk, Aberdeen Birth Cohorts (ABC 1921, ABC 1936 and Aberdeen Children of Ninety-Fifty (ANCOF)) and MELoR (Malaysian Elders Longitudinal Research), Malaysia. This year's focus has been on multi-morbidity & polypharmacy, link between anticholinergic medications and self-reported health and physical capabilities, and falls, impact of hypertensive disorders in pregnancy in cancer and CVD epidemiology, gestational diabetes and bone health and adiposity and falls and fractures. In collaboration with IMS investigators, we are working on Biobank data on the topic of falls in older people.

Database Research

The Norfolk and Norwich Stroke & TIA register received further approval for next 5 years in 2017 and therefore we continue with stroke register research. We are working closely with SSNAP team as part of Michelle's PhD and hope we will see fruit of these collaborations in 2019. As before, we continued our collaboration with various national and international colleagues in database/registry research and this included the continued collaboration with the Get With the Guidelines-Stroke Team from USA, Thai National Stroke Database work with colleagues from Thailand, VISTA Collaborators, and locally with PCCIU team, AMND databank and PINE Study. We have continued success with established collaborations with Professor Mamas' Group at Keele using MINAP and NIH work. In 2018, we continued to be a key part of the OPSOC Collaboration <http://www.opsoc.eu/> in dissemination of outputs from database in existence. As predicted in last year report OPSOC collaborative work features highly in this year research output.

Experimental Research

We are currently focusing on two translational interdisciplinary projects namely Age-GB and CAPE Study. We gratefully acknowledge the support provided by the R&D NHSG research nurse team and special thanks to Amelia from Cardiovascular Research Facility who is integral in setting up CAPE study. A brief description of both studies can be found in the press release section below. As always, we are indebted to the study participants and the various people involved in these project. Special thanks to our research nurses, Sandra Mann, Eunice Morgan (AGE-GB) and Bolanle (CAPE) without whom the study would not have come to fruition.

Scottish Care of Older People Audit

ACER team (as the academic unit of the University of Aberdeen) is working together with the Healthcare Improvement Scotland and the BGS Scotland in development of SCoOP which has the following overarching aims:

- To evaluate the variation in service provision for older people who require health and social care in various settings to serve as a driver for standardisation and improvement of care across Scotland
- To provide benchmarking tools for various care aspects of older people in Scottish NHS health and social care setting to support improvement work in services across Scotland
- To provide a health intelligence and knowledge transfer hub for service users , health care providers and policy makers through annual evaluation cycles

This is a joint initiative set up in late 2016 by three key partners: Health Improvement Scotland, the British Geriatrics Society Scotland Council, and the University of Aberdeen as the lead Academic Institution with representatives from other Scottish Universities with Clinical Academic Departments in Geriatric Medicine.

The first scoping survey was carried out in early 2018 and findings are to be presented in early 2019.

New Studies



CAPE Study: Prognostic utility of cardiovascular biomarkers in women with pre-eclampsia

Pre-eclampsia (PE) is a complication of pregnancy marked by high blood pressure and passage of protein in the urine and may result in convulsions. It is common, affecting 1 in 20 first time mothers. Globally it is an important cause of maternal deaths although this is rare in the UK. In addition, it is associated with an increased risk of heart disease later in life, including heart attacks, high blood pressure and heart failure. Heart disease is one of the biggest killers in women and also has a major impact on healthcare costs. Therefore, many international guidelines recommend following up women who have suffered from pre-eclampsia in order to prevent heart disease. Despite this, very little is known about how these women should be followed up and which tests may help identify women who are particularly at risk of heart disease in the future.

In order to address these issues, we plan to conduct a pilot study identifying women with and without preeclampsia from a database - the Aberdeen Maternity and Neonatal Databank (AMND), which has been recording all births in Aberdeen city since 1950. This will be used to inform a much larger study with the overall aim is to make recommendations for follow-up tests in women with pre-eclampsia well before the onset of heart disease and to influence international guidelines, which will have major implications in preventing heart disease in millions of women.

Suite of ACB Systematic Reviews: An evidence synthesis suite to inform a future randomised trial of reducing anticholinergic related harm in older adults

Through this work, we will carry out three complementary systematic reviews that will offer a synthesis of current knowledge around anticholinergic burden (ACB) in order to inform the design of a future randomised controlled trial (RCT) of ACB reduction while also serving as important standalone research outputs. The reviews will examine: a) Prognostic utility of ACB scales (prognostic review & network meta-analysis), b) Efficacy and/or effectiveness of ACB reduction (meta-analysis of controlled trials), c) Barriers and facilitators of ACB reduction (qualitative evidence synthesis).



Publication List

2018

Research Papers and Reviews

1. Mediterranean Diet Reduces Risk of Incident Stroke in a Population With Varying Cardiovascular Disease Risk Profiles. Paterson KE, Myint PK, Jennings A, Bain LKM, Lentjes MAH, Khaw KT, Welch AA. *Stroke*. 2018 Sep 20;2415-2420.
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3. The association between polypharmacy and late life deficits in cognitive, physical and emotional capability: a cohort study. Khezrian M, McNeal CJ, Myint PK, Murray AD. *Int J Clin Pharm*. 2019 Feb;41(1):251-257.
4. A practical risk scale for predicting morbidity and mortality in the emergency general surgical setting: A prospective multi-center study. Ablett AD, McCarthy K, Carter B, Pearce L, Stechman M, Moug S, Ceelen W, Hewitt J, Myint PK; Older Persons Surgical Outcomes Collaboration. *Int J Surg*. 2018 Dec;60:236-244.
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11. A high anticholinergic burden is associated with a history of falls in the previous year in middle-aged women: findings from the Aberdeen Prospective Osteoporosis Screening Study. Ablett AD, Wood AD, Barr R, Guillot J, Black AJ, Macdonald HM, Reid DM, Myint PK. *Ann Epidemiol*. 2018 Aug;28(8):557-562.
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In press

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Editorials

40. Management of acute coronary syndromes in older people. Soiza RL. *Age Ageing*. 2018 Jan 1;47(1):2-3.

41. The pale evidence for treatment of iron-deficiency anaemia in older people. Soiza RL, Donaldson AIC, Myint PK. *Ther Adv Drug Saf*. 2018 Jun;9(6):259-261.

Collaboration

42. Dexamethasone for adult patients with a symptomatic chronic subdural haematoma (Dex-CSDH) trial: study protocol for a randomised controlled trial. Kolas AG, Edlmann E, Thelin EP, Bulters D, Holton P, Suttner N, Owusu-Agyemang K, Al-Tamimi YZ, Gatt D, Thomson S, Anderson IA, Richards O, Whitfield P, Gherle M, Caldwell K, Davis-Wilkie C, Tarantino S, Barton G, Marcus HJ, Chari A, Brennan P, Belli A, Bond S, Turner C, Whitehead L, Wilkinson I, Hutchinson PJ; British Neurosurgical Trainee Research Collaborative (BNTRC) and Dex-CSDH Trial Collaborators. *Trials*. 2018 Dec 4;19(1):670.

43. Pazan F, Weiss C, Wehling M, FORTA (Burkhardt H, Schwarz S, Wedding U, Johnell K, Eriksson T, Ruths S, Husebø BS, Huupponen R, Ranhoff AH, Onder G, Incalzi RA, Marcucci M, Cherubini A, Volpato S, Ruggiero C, Mugelli A, Laville M, Annweiler C, Mouchoux C, Robert P, Rhalimi M, Jaurieta JJS, Mañas LR, Núñez JFM, Jentoft AJC, Rexach JAS, Agustí A, Mateos R, Laporte AS, Gladman J, Crome P, Hughes C, O'Mahony D, Byrne S, Ekpo E, Ashton C, Witham MD, Soiza RL, Wieczorowska-Tobis K, Kostka T, Sławek J, Klich-Rączka A, Grodzicki T, Bień B, Broncel M, Mierzejewski P, Jansen RWMM, van den Bemt PMLA, van der Cammen TJM, Bauer J, Berthold HK, Denking M, Dovjak P, Frohnhofen H, Frühwald T, Gisinger C, Gogol M, Gosch M, Gutzmann H, Heuser I, Hüll M, Iglseder B, Kasper S, Kwetkat A, von Renteln-Kruse W, Schindler C, Schuler M, Schulz RJ, Sommeregger U, Zeyfang A). The EURO-FORTA (Fit fOR The Aged) List: International Consensus Validation of a Clinical Tool for Improved Drug Treatment in Older People. *Drugs Aging* 2018 35:61-71

Presentation List

2018

Poster Presentations

RCPE Stroke Medicine Conference 2018 Feb 8, Edinburgh.

- Modified Early Warning Score and Risk of Mortality after Acute Stroke. Charles Knoery, Priya Vart, Allan B Clark, Stanley D Musgrave, Anthony K Metcalf, Diana J Day, Max O Bachmann, Elizabeth A Warburton, John F Potter, Phyo Kyaw Myint.

ARUK Annual Meeting 2018, 20-21 March 2018, QEII Conference Centre, London.

- Anna Wiedemann, Toby Smith, Joao H Bettencourt-Silva, Daniel Vogel, Allan Clark, Anthony K Metcalf, Kristian M Bowles, John F Potter, Phyo K Myint. Prognostic impact of co-morbidity burden on dementia incidence after stroke.

BGS Spring Meeting 2018, 11-13 April, Nottingham.

- M Khezrian, CJ McNeal, P.K Myint, A.D Murray. The triad of cognitive, physical and emotional impairment is associated with number of medications in older adults: A cohort study.
- Anna Wiedemann, Toby Smith, Joao H Bettencourt-Silva, Daniel Vogel, Allan Clark, Anthony K Metcalf, Kristian M Bowles, John F Potter, Phyo K Myint. Contribution of co-morbidity burden on dementia incidence after stroke. BGS Spring Meeting 2018, 11-13 April, Nottingham
- AD Wood, J Guillot, AD Macleod, CE Counsell, PK Myint. Anticholinergic burden in parkinsonism: relationship with mortality and cognition. Evidence from a prospective incident cohort study. BGS Spring Meeting 2018, 11-13 April, Nottingham
- AD Wood, N Lorking, S Tiamkao, AB Clark, K Kongbunkiat, JH Bettencourt-Silva, K Sawanyawisuth, N Kasemsap, MA Mamas, PK Myint. Winter excess in hospital admissions, in-patient mortality, and complications in stroke: A Thailand National Database Study. BGS Spring Meeting 2018, 11-13 April, Nottingham.
- Andrew D Ablett, Aimee Browning, Vincent Quan, Hui Sian Tay, Caroline McCormack, Ben Carter, Jonathan Hewitt, Phyo K Myint. on behalf of Older Persons Surgical Outcomes Collaboration. Anti-cholinergic burden and patient related clinical outcomes in an emergency general surgical setting. BGS Spring Meeting 2018, 11-13 April, Nottingham.

- A D Ablett, K McCarthy, B Carter, L Pearce, M Stechman, S Moug, W Ceelen, J Hewitt, P K Myint. on behalf of the Older Persons Surgical Outcomes Collaboration. MALE (Male, Anemia, Low albumin, Eighty-five years or over) risk score is associated with poor outcomes among older patients in the emergency general surgical setting: findings from the Older Persons Surgical Outcomes Collaboration (OPSOC). Prospective Cohort Study. BGS Spring Meeting 2018, 11-13 April, Nottingham.

Joint Annual Scientific AAA and BGS POPS SIG Meeting, London.

- Tay HS, Myint PK, Pearce L, Moug SJ, McCarthy K, Stechman MJ, Carter B, Hewitt J. Cohort Profile: Older Persons Surgical Outcomes Collaboration (OPSOC). AAA/BGS POPS Joint meeting London 2018 17-18 May.

Spring Meeting of the Society of British Neurological Surgeons (SBNS) jointly with the German Society of Neurosurgery (DGNC)At: Southampton, UK. 2015.

- Dex-CSDH trial: a randomised, double blind, placebo-controlled trial of a two-week course of dexamethasone for adult patients with a symptomatic Chronic Subdural Haematoma. E Broughton, A.G.Kolias, A.Belli, et al. (21 authors).

Alzheimer's Society Annual Conference May 2018 London.

- Anticholinergic medications and benzodiazepines and long-term cognitive decline: findings from the Anticholinergics, Benzodiazepines, Cognition and Dementia (ABCD) study. Kathryn Richardson, Carlota Grossi, Chris Fox, Ian Maidment, Yoon Loke, University of East Anglia, Nicholas Steel, Antony Arthur, Katharina Mattishent, Kathleen Bennett, Phyo Myint, Noll Campbell, Carol Brayne, Fiona Matthews, Malaz Boustani, Louise Robinson, George Sawa.

- Anticholinergics and Benzodiazepines medication use and 10-year cognitive decline in MRC Cognitive Function and Ageing Study. Carlota Grossi, Kathryn Richardson, Chris Fox, Ian Maidment, Nicholas Steel, Yoon K Loke, Antony Arthur, Phyo K Myint, Noll Campbell, Malaz Boustani, Louise Robinson, Carol Brayne, Fiona Matthews, George M Sawa.

SINAPSE Conference 25 June 2018. Quincentenary Building, Royal College of Surgeons of Edinburgh. Edinburgh, UK.

- Aspirin use, brain MRI hyperintensities, hippocampal atrophy and cognitive function in older adults: a cohort study. M Khezrian, P K Myint, C J McNeal, A-L Sandu, R T Staff, A D Murray.

NRS Conference, 30 October, Perth 2018.

- Older age is associated with higher percentage of breaches for 4 hour Emergency Department waiting time: Scottish Experience. Graham Ellis, PK Myint.
- Scottish Care of Older People (SCoOP): Initial Scoping Survey of Healthcare Services in the Acute Sector. Maryam A. Barma, Tiberiu A. Pana, Samuel R. Neal, Jesus A. Perdomo and Alison IC. Donaldson on behalf of the SCoOP Steering Group.
- Survey of Care Home Interest in Participating in Nutritional Intervention Trial. Donaldson, A.I.C., Kishor, M, Scott, K, Johnstone, A.M, Myint, P.K.

UK Stroke Forum, 4-6 December, Telford, UK.

- Predictors of mortality and disability in Stroke Associated Pneumonia. Rory J Tinker, Craig J Smith, Calvin Heal, Joao H Bettencourt-Silva, Anthony K Metcalf, John F Potter, Phyo K Myint.

BGS Autumn Meeting, 14-16 November 2018, London

- HS Tay, A Ablett, LA Evans, A Browning, J Goeteyn, S Owen, PK Myint, J Hewitt, on behalf of OP-SOC. Older People Surgical Outcomes Collaboration: Academic training and development.

Fourth European Stroke Organization Conference (Gothenburg, 16-18 May, Sweden), 2018

- Davison WJ, Myint PK, Pottter JF. A comparison of blood pressure variability assessed by different methods of measurement over varying time periods in cerebrovascular disease.
- Davison WJ, Myint PK, Pottter JF. A comparison of different methods of assessing and calculating blood pressure variability post-stroke or TIA.
- Davison WJ, Myint PK, Pottter JF. Altered baroreceptor sensitivity and heart rate variability after stroke predict increased blood pressure variability.

OARSI. World Congress on Osteoarthritis. 26-29 April 2018. ACC Liverpool.

- Fast-field cycling magnetic resonance imaging – developing a new biomarker for early osteoarthritis of the knee. IA Rankin, LM Broche, R James, BW Kennedy, CF MacEachern, H Rehman, PK Myint, DJ Lurie, GP Ashcroft.

FFN Meeting, 24-26 Nov 2018, Tokyo, Japan.

- Dietary interventions for weight reduction on fall-related risk factors in older adults- A systematic review. Kioh S H, Tong LR, Mat S, Myint PK, Tan MP.

Scottish BGS Spring Meeting, Rutherglen, 27 April 2018.

- Pana TA, Neal SR, Perdomo J, Donaldson AIC. On Behalf of SCoOP Steering Group. Scottish Care of Older People: initial scoping survey results.

Oral Presentations

ESC Conference 2018, Athens, Greek, 11-13 April 2018.

- Pana T, Wood A, Perdomo-Lampignano J, Tiamkao S, Clark A, Kongbungkiat K., Bettencourt-Silva J, Sawanyawisuth K, Kasemap N, Mamas M, Myint P. Heart Failure in Acute Ischaemic Stroke and Intracerebral Haemorrhage: impact on mortality and recurrence. A Thailand National Stroke Cohort Study.
- Pana T, Wood A, Mamas M, Clark A, Bettencourt-Silva J, McLernon D, Metcalf A, Bowles K, Potter J, Myint P. Myocardial infarction after stroke: incidence, mortality, and time-dependent predictive co-morbid factors.
- Raphae S. Barlas, Yoon K. Loke, Mamas A. Mamas, Joao H Bettencourt-Silva, Isobel Ford, Allan B. Clark, Kristian M. Bowles, Anthony K. Metcalf, John F. Potter, Phyo K. Myint. Choice of antiplatelet therapy affects mortality outcome in ischemic stroke: a cohort study.

NAPCRG (North American Primary Care Research Group) annual meeting Chicago, Illinois • November 9-13, 2018.

- Comparison of different scales to quantify Anticholinergic Burden and their association with adverse outcomes in 502,616 UK Biobank participants. Peter Hanlon, Terence Quinn, Katie I Gallacher, Phyo Myint, Bhautesh Jani, Richard Lowrie, Samuel Neal, Barbara I Nicholl, Roy Soiza, Frances S Mair.

European Union Geriatric Medicine Society Congress, Berlin, 10-12 October, 2018.

- Is acute care ageist? Graham Ellis, Phyo K Myint.

Public Engagement 2018



Science Day 27 May 2018

One of the key activities of ACER is public engagement. In 2018, we continued to actively engage with such activities. These included Science Sunday in May participating in the Development Trust event, and TechFest in September.

TechFest 11 September 2018

Three of our summer research students showcased their research to the general public. Tiberiu did an oral talk and Weronika and Zahra did posters. They were well received by the public who attended the event and received many positive feedbacks.



Press Releases



Commonly prescribed medication linked to stroke

The study, published this week in The International Journal of Epidemiology, has shown for the first time that patients treated with drugs with anticholinergic 'side effects have a 60% increased risk of stroke.

Many common medications are known to have so-called anticholinergic properties. This can lead to disruption in communication between parts of the nervous system, and can manifest symptomatically as blurred vision, confusion and memory loss. The effect of anticholinergic drugs on stroke, however, has never been identified.

Mediterranean-style diet may lower women's stroke risk

One of the largest and longest-running efforts to evaluate the potential benefits of the Mediterranean-style diet in lowering risk of stroke found that the diet may be especially protective in women over 40 regardless of menopausal status or hormone replacement therapy, according to new research in the American Heart Association's journal Stroke.



Researchers from the Universities of Aberdeen, East Anglia and Cambridge collaborated in this study using key components of a traditional Mediterranean-style diet including high intakes of fish, fruits and nuts, vegetables, cereal foods and potatoes and lower meat and dairy consumption.



Study reveals lifesaving benefits of new Scottish standards in hip fracture care

Adhering to Scottish standards of care following a hip fracture improves the survival of patients. Adhering to Scottish standards of care following a hip fracture not only improves the survival of patients, but also reduces the duration of hospital admission and reduces the need for transfer to high-care settings, according to a new study.

Andrew Hall and Luke Farrow who led the study at The University of Aberdeen state that Scotland 'is leading the way in the care of hip fracture patients, and the standards set up and down the country are a benchmark to which other nations can aspire'.



Marriage may protect against heart disease or stroke and associated risk of death

A global study led by Keele University in collaboration with the University of Aberdeen has found that marriage may protect against the development of heart disease and stroke as well as influencing who is more likely to die of it - with single, divorced, and widowed at heightened risk.

The findings of the study, published online in the journal *Heart*, prompted the researchers to suggest that marital status should be included as a risk factor for heart disease and stroke and even likelihood of survival in its own right.

Early warning tests for women's heart disease

Tests that 'red flag' the early signs of heart disease in women who had high blood pressure during pregnancy could be developed following a new project by the University of Aberdeen. While rarely a cause of maternal death in the UK, pre-eclampsia is associated with an increased risk of heart disease later in life, including heart attacks, high blood pressure, heart failure and stroke.



Supported by a £20,000 grant from Tenovus Scotland Grampian, researchers from the University of Aberdeen will develop a pilot study by identifying women with and without preeclampsia from the Aberdeen Maternity and Neonatal Databank (AMND) which has recorded all births in Aberdeen city since 1950.



Alzheimer's study to look at gut health link

Researchers will study the gut health of people with Alzheimer's to see if diet can play a role in managing the behavioural and psychological symptoms of the disease. The University of Aberdeen study, which is the first of its kind, will recruit participants from local care homes. There is increasing evidence that suggests the gut microbiota is a key link between specific nutrients and brain function.

This first study aims to collect faecal samples from three groups of people – people with dementia and challenging behaviour; people with dementia without challenging behaviour; and a control group of people without dementia. If successful, this study could act as the first step towards establishing a link between diet and behaviour and possibly lead to future research looking at teasing out the complex relationship between diet, gut microbiota and challenging behaviour in Alzheimer's disease.

Congratulations



Dr. Adrian Wood

Congratulations to Adrian Wood who has now become an academic foundation doctor year 1 in academic medicine rotation in North. He will be supervised by Phyto and he will continue to work on his ongoing research projects with ACER. He will be academic foundation doctor (honorary clinical research fellow with ACER till mid 2020).



Dr. David Gamble

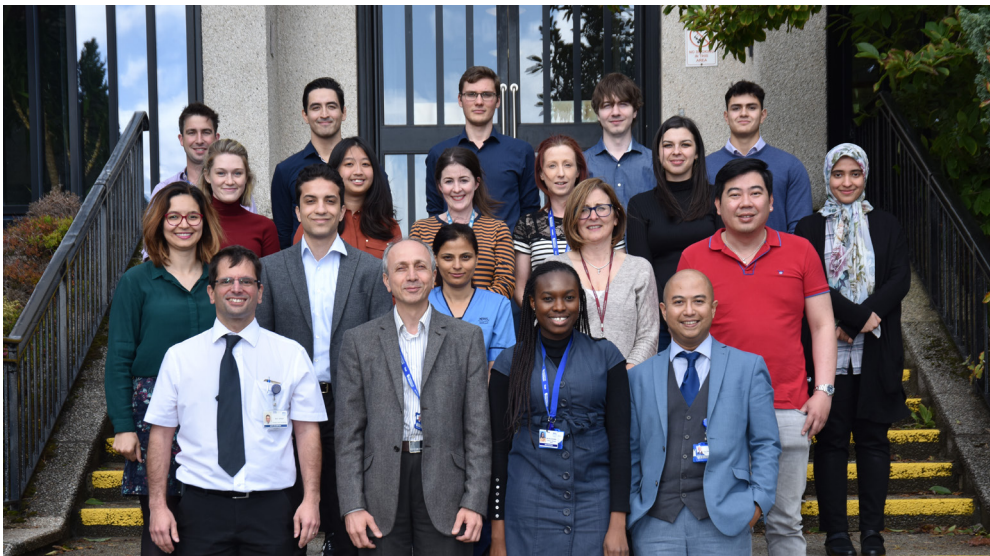
Appointed as Honorary Research Fellow through as Academic Core Training Scheme of ACAT (2018-2020) and securing Teno-vus funding for CAPE study. We are excited about him joining us and looking forward to collaboration with both AMND (led by Dr. Sohinee Bhattacharya) and CV research group (led by Prof. Dana Dawson).

Looking Ahead 2019

Looking ahead for 2019, we are particularly looking forward to starting new projects and continue to foster ageing clinical and experimental research together with our collaborators, staff and students. We have achieved our ambition to expand our internal and external collaborations through various projects in 2018 and we aim to continue this success.

Clearly there are challenges ahead: delivering research in a busy clinical environment is never easy but we have demonstrated our ability to overcome these challenges and therefore we are confident that we will be able to carry out planned research activities in 2019 successfully. These include the Ageing-GB study and RAINDrop Pilot RCT of Iron Deficiency Anaemia Management.

Some of the ACER Team Members in the 2018 Autumn sunshine



Front row: Roy Soiza, Hamid Baradararan, Bolanle Brikinns, Phyo Myint

Second row: Mina Khezrian, Annes Ahmeidat, Sirjana Devkota, Jacqui Inch, Athagran Nakham (Toney)

Third row: Katie Hutchison, Phui Yuen Wong, Pamela Paton, Carrie Stewart, Michelle Tørnes, Zahra Pasdar

Last row: David Gamble, Andrew Ablett, Tiberiu Pana, Jesus Perdomo-Lampignano, Abdel Rahman Abdel-Fattah.

Members

December 2018

Lead Academic

- Professor Phyo Kyaw Myint

Honorary Senior Clinical Academic Staff

- Dr Roy Soiza-Honorary Senior Clinical Lecturer
- Dr Robert Caslake-Honorary Senior Clinical Lecturer

Clinical Lecturers

- Dr Alison Donaldson- SCREDS Clinical Lecturer
- Dr Isobel Sleeman- Honorary Clinical Lecturer

Research and Related Staff

- Dr Carrie Stewart –Dunhill Medical Trust Research Fellow
- Dr Frances Notman- Research Fellow (CHIPPS)
- Jackie Inch- Research Fellow (CHIPPS)
- Bolanle Brikinns (RAINDroP Co-ordinator)

Postgraduate Research Students

- Miss Michelle Tørnes- PhD Candidate
- Mr Athagran Nakham- PhD Candidate
- Dr Nadiya Sivaswamy- MPhil Candidate
- Mrs Mina Khezrian- PhD Candidate
- Dr Selvarani Subbarayan- Research Fellow (SENATOR) and Staff PhD candidate
- Miss Sheng Hui Kioh (Melissa)- PhD Candidate (University of Malaya/Malaysia)

Honorary Clinical Research Fellows

- Dr Joanne Carr- Academic Core Trainee/Honorary Research Fellow
- Dr Hajirin Razak Ariffin Ahamat- Honorary Research Fellow
- Mr Luke Farrow- Academic Core Trainee/Honorary Research Fellow
- Mr Iain Rankin- Honorary Teaching Fellow
- Dr David Gamble - Honorary Research Fellow
- Dr Adrian D Wood – Honorary Research Fellow

UoA Staff/Student Affiliates

- Mr Raphae Barlas - 5th Year MBChB
- Miss Chee Chee Tang- 5th Year MBChB
- Mr Tiberiu A Pana - 4th Year MBChB
- Mr Samuel Neal – 4th Year MBChB
- Mr Jesus A Perdomo-4th Year MBChB
- Mr Andrew Ablett -4th Year MBChB

NHS Research Nurses

- Sirjana Devkota (RAINDrop)
- Pamela Paton (RAINDrop)
- Sandra Mann (Age-GB)
- Eunice Morgan (Age-GB)

Visiting Staff/Students/External Affiliates

- Mr Stephen McCall- PhD Candidate, University of Oxford
- Dr Mohannad Kafri-Assistant Professor, Birzeit University
- Mr Gurdeep Mannu- Clinical Research Fellow, University of Oxford
- Dr Joao H Bettencourt-Silva, IBM
- Dr Andrew Hall- Honorary Research Fellow
- Dr Chun Shing Kwok - Honorary Research Fellow and Clinical Lecturer in Cardiology, Keele University
- Dr Emma Law- Honorary Research Associate RIN, NHS Tayside
- Professor Hamid Baradaran- Honorary Visiting Professorial Fellow

Other staff and students currently working with us for ongoing research

UoA MBChB and Medical Science undergraduate students

- Zarah Pasdar, Annes Ameidat, Katriona Hutchison, Phui Yuen Wong, Weronika Szlachetka, Kaisa Yrjana, Mitrysha Kishor, Katie Reid, I Tung, Zi lei Hua (Alex), Nicole Lorking, Abdel Rahman Abdel-Fattah, Genevieve Marsh-Feiley.

NHSG Academic Foundation Doctors

- Maryam Barma; Damjan Veljanski; Eilidh Bruce; May Khei Hu, Sara Venturini.

NHSG Clinical Colleagues (STRs/Consultants)

- Alice Einarsson, Jennifer Lowrie



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