Institution: University of Southampton

Unit of Assessment: 2 Public health, health services and primary care

a. Overview

This submission comprises the Primary Care research group, within the Primary Care and Population Sciences Academic Unit (PCPS, Director Roderick, UoA1), in the Faculty of Medicine.

The Faculty of Medicine was created in 2010 from a single school which placed the Dean at the centre of University governance (on the University Executive Group). The Faculty employs 184 academic staff including 77 professors and 107 readers, senior lecturers and lecturers. Its annual research income is currently £26.1million, having grown by a third since 2008. It is organised into four research led Academic Units: Clinical Experimental Sciences (CES); Human Development and Health; Cancer Sciences; and PCPS. Four Research Centres are fully integrated with the Faculty and its strategy: the MRC Lifecourse Epidemiology University Unit; CRUK Cancer Centre and Experimental Cancer Medicine Centre; NIHR Nutrition Biomedical Research Centre (BRC); and NIHR Respiratory Biomedical Research Unit (BRU). The central vehicle for deciding strategy is the Faculty Leadership Team which meets bi-monthly and comprises the Dean; Associate Deans for Research (ADR), Education and Enterprise/Internationalisation; Heads of Academic Units; Faculty Finance Officer; and Faculty Operating Officer. The Research Management Committee, (RMC) chaired by the ADR, brings together stakeholders in the Faculty and University Hospital Southampton, and controls a pump-priming budget to support research innovation

The PCPS Academic Unit was established in 2010, evolving from the Community Clinical Sciences research division. There is a single management structure with monthly senior academic team meetings and periodic away days for all staff, to consider policy, strategic planning, and research oversight. Primary Care is the largest group in PCPS. It is supported by methodologists in medical statistics and health economics. PCPS also contains a Public Health group (submitted in UoA1) and NIHR Research Design Service (RDS) South Central hub (Director **Mullee**). PCPS has 17 senior staff (seven professors, four readers, and six senior lecturers). Primary Care has 11 senior staff (five professors, three readers, three senior lecturers). The size, productivity, and influence of the Primary Care group has doubled since 2008, with sufficient critical mass to submit 13 (10.4fte) academic staff to this UoA compared with seven (5.5fte) in RAE 2008. In addition we have 14 doctoral students, 18 postdoctoral staff, and 34 research staff. All our research involves active multidisciplinary collaboration within the University, in particular with the PCPS Public Health group; MRC Lifecourse Epidemiology University Unit; NIHR Nutrition BRC; NIHR Respiratory BRU; CES Liver Disease group; Southampton Statistical Sciences Research Institute (S3RI); Health Psychology group; Electronics and Computing Sciences group; and Faculty of Health Sciences.

b. Research strategy

Since 2008 we have built on our existing strengths in acute infections, mental health problems, and complementary medicine, acknowledged in RAE 2008 and recognised through inclusion in 2009 in the NIHR School for Primary Care Research (SPCR), one of only eight departments nationally. Our strategy has been to use the opportunities provided by membership of the SPCR, and the EU GRACE respiratory infection research consortium, to further our aims:

(i) To build capacity through the retention and recruitment of productive staff, and strengthen our methodological support for primary care research:

We expanded into respiratory research by recruiting a new primary care research chair (**Thomas**), brought **Kendrick** back to a chair in primary care research in 2013 after three years away as Dean of Hull York Medical School, and retained **Lewith** and **Raftery** as research active chairs. We recruited a senior lecturer in statistics with primary care expertise (**Dimitrov**), a chair in medical statistics (Boehning (UoA10), 30% in Faculty of Medicine) a reader in health economics (**Yao**) and SPCR-funded postdoctoral fellows in statistics (Stuart) and health psychology (Geraghty). Senior lecturer **Moore**, and NIHR postdoctoral fellow **Leydon,** were promoted to readerships.

(ii) To increase multidisciplinary research and lead successful multicentre bids:

£3.4m of SPCR funding has been used successfully since 2009 to pump-prime a wide range of development and feasibility studies leading to applications for further NIHR and other grants. We lead the multicentre SCPR CANDID lung and colorectal cancer cohort and ATAFUTI trial of alternative treatments for adult female UTIs and are key collaborators in the SPCR BARACK-D trial of aldosterone receptor antagonism in chronic kidney disease; DUTY cohort of diagnosis of UTI in

children and TARGET cohort on childhood respiratory infection prognosis. GRACE consortium projects include the R-GNOSIS trial of near-patient tests for UTI, and two of the largest trials of antibiotic use led by **Little**: the GRACE trial of amoxicillin for LRTI (n=2061), and the GRACE INTRO trial (n=4264). We are addressing key public health problems including obesity and alcohol, and developing web-based self-management interventions for a range of chronic diseases using a complex intervention approach with Health Psychology, and complementary health care interventions such as mindfulness-based stress reduction (MBSR) and acupuncture.

(iii) To support our research students and early career researchers to obtain doctoral, postdoctoral and senior fellowships:

We have been awarded five NIHR SCPR-funded doctoral fellowships (in national open competition), three NIHR- and one Arthritis Research UK-funded postdoctoral fellowships, two NIHR Academic Clinical Fellowships, one GP In-Practice Fellowship, and one Clinical Lectureship.

(iv) To produce top quality research outputs with significant external impact:

The Primary Care group produced 456 ISI-indexed publications during the period (including 113 by **Lewith** and 101 by **Little**), including 286 peer-reviewed papers and 42 reviews, with co-authors from 380 institutions worldwide, funded by 220 agencies. These outputs generated 2,533 citations (including 2,121 citations of the peer-reviewed papers and 330 citations of the review articles).

Our future strategic aims and goals for the next five years are:

(i) To remain a vibrant primary care research group within the NIHR SCPR with critical mass and national and international prominence:

- To develop new directions for our antibiotic research, including targeted treatment using decision rules and near patient testing, alternative strategies for symptomatic infection (e.g. the ongoing ATAFUTI trial), and immune stimulation with probiotics and other candidates.
- To continue to develop mental health research particularly in the areas of assessment and management of common mental health problems (e.g. delineating distress from depression and anxiety, monitoring depression, and developing algorithms for antidepressant use).
- To continue to develop large robust trials of non-pharmacological approaches to chronic disease management (e.g. MBSR, CBT-based guided self-help) to extend web-based interventions to population settings (e.g. for obesity in Teeside); to different platforms (such as mobile phones); and to other common conditions (e.g. back pain, asthma, and distress).

(ii) To continue to develop stronger links within the Faculty of Medicine:

- Working with the NIHR Respiratory BRU on COPD and asthma and respiratory infection led by **Thomas,** we have established the SOTONAIR collaborative group with Djukanovic and Howarth (UoA1) to look at behavioural and other non-pharmacological interventions for asthma, and asthma biomarkers, in primary care.
- Working with the NIHR Nutrition BRC on obesity, and on under-nutrition in the elderly, we aim to become part of a WHO Collaborating Centre for nutrition in primary care, led by Margetts (UoA1).

(iii) To build on our research peaks to develop new areas of research with new staff:

- Developing work with the new Chair of Clinical Infectious Disease Read (UoA1).
- **Moore** is collaborating with Clarke in Microbiology and Roderick in Public Health (both UoA1) on community carriage studies researching vaccine effectiveness, and on the epidemiology of post-operative wound infection using the General Practice Research Database (GPRD).

(iv) To strengthen our methodological expertise and support:

- To recruit health economics fellows alongside our new reader (**Yao**).
- To expand statistics through a shared appointment with the Clinical Trials Unit and S3RI (Haviland, UoA1) and integrate Faculty support (**Dimitrov** overseeing the BRC statisticians).

(v) To further develop our doctoral students and early career researchers:

- To continue to win NIHR doctoral, postdoctoral and senior fellowships.
- To continue to recruit to our NIHR Academic Clinical Fellow and Clinical Lectureship posts.
- To further develop our Research Education Advice and Communication in Health (REACH) early career researcher (ECR) development forum.
- To contribute actively to doctoral and postdoctoral conference programmes, and continue to send our students and ECRs to national and international meetings to present their research.

(vi) To utilise routinely collected data to answer important research questions:

- To continue to develop expertise in database support and statistical analysis of large databases including the Clinical Practice Research Database (CPRD), and the Hampshire Health Record, a unique local primary-secondary care linked dataset of one million records.
- To evaluate the processes and outcomes of key chronic diseases including acute infections, depression, asthma, chronic obstructive pulmonary disease (COPD), renal and liver disease.
- To evaluate primary care service changes, with the Academic Health Science Network.

(vii) To contribute to the implementation of research findings in primary care:

- To contribute to the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC)-funded Centre for Implementation Science on developments in appropriate antibiotic prescribing and detection of liver disease, with the Faculty of Health Sciences.

(viii) To consolidate our strategy of working with major external partners:

- To continue to play a leading role in the SPCR Board and NIHR grant panels.
- To continue to develop multinational projects through the GRACE infection consortium.
- To continue work with charitable funders (e.g. Asthma Research UK and Macmillan).

(ix) To respond to national and international priorities and initiatives:

- To continue to contribute to NIHR and Royal College of General Practitioners (RCGP) strategic groups, boards and panels
- To continue membership of NICE and other national and international guideline groups
- To develop new areas of research, e.g. into the care of dementia in primary care.

Research themes

Primary Care is a single coherent research group, supported by methodologists within PCPS, which addresses key research themes led by senior academics, a number of which overlap by topic or methodology or both. Consequently, members of the group commonly contribute to more than one of the themes, which are as follows:

Improving the management of acute infections and reducing antibiotic prescribing

Little, with **Williamson** and **Moore**, and supported methodologically by **Mullee, Raftery** and **Leydon,** has led a series of projects funded by NIHR Health Technology Assessment (HTA), NIHR Programme Grant for Applied Research (PGAR), and EU grants e.g. GRACE (£822k), and PRimary care Infection Management for Everyday practice (PRIME) study (£1.99m). Following landmark trials developing open pragmatic trial methodology for prescribing strategies in sore throat, otitis media and acute cough, we developed and trialled clinical prediction rules, dipstick 'rules' and delayed prescription for urinary tract infection (UTI), demonstrating modest reduction in antibiotic use was possible. A high profile trial demonstrated the limited impact of both antibiotics and nasal steroids for rhino-sinusitis, supported by systematic review with individual patient data (**Williamson)**. The largest placebo-controlled trial to date in acute chest infections (n = 2061) demonstrated that when pneumonia is not suspected clinically, antibiotics provide little benefit for acute lower-respiratory-tract infection in primary care, both overall and in patients aged 60 years or more, and cause slight harms. Such trials all supported NICE 2008 guidance (chaired by **Little**) to avoid prescribing antibiotics or use a delayed prescription for those with no complications (see **Impact Case Study UoA2 ICS 11**). **Williamson** and **Little** also showed that topical intranasal steroids were not effective for otitis media in general practice. We have recruited **Dimitrov** with statistical expertise of evaluating prediction rules relevant to primary care (e.g. ABCD rule, Centor score in sore throat) and extended this approach to the CANDID largest primary care cohort to date for diagnosing common cancers (colorectal and lung) (**Little, Roderick, Leydon).**

Improving the assessment and management of mental health problems in primary care

Kendrick and **Moore** (with Liverpool and East Anglia) showed that the inclusion of GP performance indicators for the assessment of severity of depression at diagnosis and follow-up was associated with better targeted treatments and referrals, in multi-practice observational studies (see **Impact Case Study UoA2 ICS 12**). **Leydon** led qualitative research showing that patients valued severity assessment questionnaires but that some GPs were concerned about adverse effects on consultations for depression and on the doctor-patient relationship. **Moore** and **Kendrick** also led the analysis of GPRD data (from 170 practices over 13 years) showing that the rise in antidepressant prescribing is due to increases in the proportion of patients on long-term medication rather than any increase in the rate of diagnosis of incident depression, and pointing to

the need to research longer term prescribing in primary care as well as the initial decision to prescribe. **Kendrick** is working on the development of an algorithm to inform clinical decision making about starting antidepressants in primary care, through an NIHR PGAR-funded cohort and trial with UCL, Bristol, York and Liverpool. **Moore** and **Kendrick** are working with Geraghty on delineating distress from anxiety and depression; developing web-based guided self-help approaches to help 'demedicalise' distress and reduce demands on primary care; and on a systematic review and controlled trial of using patient reported outcome measures in depression.

Complementary therapies and approaches for common primary care conditions

Lewith and **Little** have evaluated the Alexander Technique (AT) for chronic/recurrent back pain (MRC ATEAM study with Bristol followed by the NIHR Efficacy and Mechanism Evaluation (EME) funded ASPEN study. Having demonstrated that AT is cost-effective, they are evaluating the additive effect of physiotherapy and exploring recovery mechanisms. **Lewith** has evaluated acupuncture for managing osteoarthritic pain, and contributed to individual patient data meta-analysis of acupuncture for chronic back pain, showing it is effective and a reasonable referral option. Significant differences between true and sham acupuncture indicated that acupuncture is more than a placebo. However, the differences are modest, suggesting that other factors besides needling contribute to its effects. **Lewith, Moore** and **Little** are researching herbal remedies for acute and chronic conditions (e.g. recurrent UTI, polycystic ovary); placebo effects with Bishop in Psychology; and MBSR for common cancers (breast, prostate) with **Leydon**, with NIHR Research for Patient Benefit, and SPCR funding. They are part of two EU funded collaborations in this area.

Internet health promotion and disease self-management programmes to increase access

Little, Moore, Raftery, Leydon, Yao, and several ECRs have worked with Yardley in Psychology (UoA4) developing and evaluating web-based interventions promoting lifestyle change (e.g. for obesity, hypertension) and self-management of common conditions (e.g. dizziness, chronic fatigue syndrome, hypertension **(Little)**, irritable bowel syndrome (IBS, **Everitt)**, childhood eczema (**Santer)**, and distress (Geraghty), funded from the NIHR Research for Patient Benefit (RfPB), HTA, and SPCR programmes. Having piloted effective websites, large MRC- and HTA-funded trials are underway for infection transmission, obesity and IBS. **Little** (with Oxford) has shown that telemonitoring and self-management are effective in the management of hypertension.

Assessment and management of respiratory disorders in primary care

Thomas has brought extensive experience of research into asthma and COPD in primary care and is fostering links with our NIHR Respiratory BRU and developing integrated research into chronic respiratory conditions including non-pharmacological approaches for patients with mild asthma. He is leading a large NIHR HTA trial on breathing exercises for asthma (Breathe) building on an initial promising smaller study, with **Little** and Yardley (Psychology, UoA4). With Yardley and **Kendrick** he is developing web-based guided self-help for people with comorbid asthma and anxiety disorders. Using the GPRD he has described dramatic recent prescribing trends for childhood asthma showing frequent off-guideline, off-licence and potentially dangerous prescribing, including inappropriate use of very high doses of inhaled corticosteroids.

Prevention and management of obesity and alcohol problems

Moore has worked on chronic liver disease with Sheron, Parkes and Roderick (submitted in UoA1) to evaluate risk stratification of liver disease risk using non-invasive markers. We have set up a cross-Faculty research group (the Wessex Alcohol Research Centre) with strong patient and public involvement (PPI). **Moore** has collaborated with Sheron (hepatology) and Sinclair (addiction psychiatry), both in UoA1, with RfPB funding to address the feasibility of early identification of alcoholic liver disease in primary care and intervention based on feedback of liver disease risk, and have British Liver Trust funding for a new feasibility study for more extensive identification of liver risk using fibrosis markers in primary care. **Moore and Little** are building on a successful web-based behavioural intervention for obesity, developing an integrated obesity and alcohol intervention for those at risk of cirrhosis due to the combined effects of alcohol and fatty liver, linking with the NIHR Nutrition BRC (Byrne, UoA1). **Moore** is involved in RfPB-funded research into morbid obesity showing that the perspectives of obese patients with type 2 diabetes on the impact of excess weight and ability to lose weight are critical determinants in considering the likely need for bariatric surgery. He is collaborating on an NIHR EME-funded trial on a new method for bariatric surgery (Endobarrier) for weight loss, with researchers at Imperial College London.

Research support

The Faculty set an annual growth target of 10% and a programme of research support services in order to help achieve this, and it has exceeded the target each year since 2008. The Faculty has a dedicated research support team comprising a senior research manager, two research support officers and a business development manager, working on a daily basis with the Associate Deans for Research and Enterprise. All stages of the research project lifecycle are supported including: horizon scanning and influencing calls; targeting calls to key investigators; providing bid support (helping with assessing eligibility, generic statements, impact statements, engaging applicants with university and NHS ethics processes and with the University EU office; organising internal peer review, setting up mock panels and interviews for fellowships; and project-managing multi-Faculty bids. We are developing our research support infrastructure in a way that is fully informed by research intelligence. We have installed research management tools such as Agresso Awards Management which has allowed us to monitor grant applications and success-rates at the level of individual PIs. This allows us to respond to our needs better, e.g. to organise externally-run grant-writing workshops targeted to specific individuals such as first-time applicants, or those with a lower-than-expected success rate. The RMC dispenses awards of up to £15k (following peer-review) to pump-prime ECRs and inter-Faculty collaborations, or as contributions to multi-user equipment. Since 2008 we have made 65 awards, totalling £690k. This has yielded preliminary data supporting 44 new applications to external funders, resulting in over £2.6m of new research grants (15 to ECRs), and initiated 83 collaborations, mostly with other Faculties. A second scheme, launched in 2010, provides research expenses for NHS-contracted Academic Clinical Fellows and has made 22 awards totalling £200k, providing grant-writing practice at a very early stage of the clinical academic career. We are incorporating the use of the Institution Research Management System 2 (IRMS2) into our management decisions, which integrates awards, outputs and postgraduate supervision data at the level of individual PI. In PCPS we appointed a research manager Chatwin in 2008 who provides dedicated advice and support on R&D liaison, governance and ethics. She helps PIs get their research up and running and has increased our productivity.

Internal and Cross-Institutional dissemination of Research

In Southampton numerous opportunities include monthly seminars within PCPS with a mix of internal and external speakers; other Faculty of Medicine seminars (e.g. the MRC Lifecourse Epidemiology University Unit programme); the annual PCPS PhD conference with oral presentations and posters by students; and the Population Health University Strategic Research Group regular cross-Faculty seminar series, conferences and website for networking. Our researchers also attend the Faculty's annual research conference in July which offers postgraduate students, academic clinical fellows and postdoctoral research assistants in Medicine, as well as collaborators in other Faculties, the chance to present their work either orally or through posters. The meeting concludes with a distinguished lecture (recent examples include Professors Steve Jones and Steve O'Rahily). This complements the Faculty's Annual Translational Research Conference in November, organised in partnership with University Hospital Southampton (UHS) and showcasing research from the Faculty as well as NIHR-portfolio research sponsored by UHS and concluding with the Wade Lecture (given recently by Dame Sally Davies and Sir John Tooke).

c. People, including:

i. Staffing strategy and staff development:

To enhance the career development and research excellence of ECRs in PCPS we have set up the REACH forum which includes all doctoral and postdoctoral students and fellows, led by **Leydon** and **Everitt.** This meets regularly to present research ideas and findings and discuss issues of common concern and there is REACH representation on the Senior Management Team (SMT). The group helps us fulfil the requirements of the Research Concordat to support career development of ECRs. Senior PCPS academics provide individual mentorship to ECRs, which is complementary to the Faculty-wide mentorship scheme. A senior staff member **(Lewith)** is responsible for postgraduate development within the Unit in liaison with the SPCR**.** We have an internal peer review system for all grant and fellowship applications including pre-submission panels run by the NIHR RDS, and mock fellowship interview panels. We promote the diversity agenda: Athena SWAN is a standing item at SMT and Faculty Leadership Team meetings, and we are implementing our plan to achieve a silver award led by a senior academic (Parkes, UoA1). We are succession planning for senior staff through internal promotion **(Leydon, Moore),**

recruitment of outstanding postdoctoral researchers (**Santer**, **Everitt**, Geraghty, Stuart), and providing active support for applications for postdoctoral and senior fellowship awards.

ii. Research students:

Currently we have 14 doctoral students registered in the Faculty. All are jointly supervised by two or more academics, at least one within PCPS and one in another Faculty, or occasionally from outside the University. In addition we have four students jointly supervised but registered with groups in other Faculties (Health Psychology and Health Sciences). The Faculty Graduate School Programme provides generic support (developing skills in ethics, presentations, statistics, etc.) and our researchers have taken advantage of other opportunities in the University or other institutions (e.g. qualitative methods in the Faculty of Health Sciences; CASS Courses in Applied Social Surveys in S3RI; the MSc in Research Methods in Manchester; and short courses e.g. the London School of Hygiene course in Advanced Epidemiology). PCPS has set aside specific funding for such training and has initiated an annual presentation event for PhDs. We have also revised our support for PhDs students to include an annual formal assessment with an invited internal adviser from outside the supervisory team. Our students attend the University's Researcher Development and Graduate Centre and Career Destination Unit training in transferable skills (e.g. on job interviews, and intellectual property. Seven students were awarded doctorates in the Faculty of Medicine during the period, four of whom went on to research posts and two to clinical posts. Eleven postdoctoral staff left, four to further research posts in the UK and one to a clinical post.

d. Income, infrastructure and facilities

Over the assessment period we attracted 47 grant awards totalling £17.9m, with a success rate of 71%, a research spend of £8.9m within the Faculty, and significant expenditure within the NHS. These include: the CANDID cohort developing prediction rules for cancer (PI **Little,** NIHR SPCR £2.1m); ATAFUTI alternative treatments for female UTI study (**Moore, Little, Lewith,** SPCR £2m); PRIME Programme in acute RTIs (**Little, Williamson, Moore,** NIHR PGAR £2m); Breathing exercises in asthma (**Thomas, Little**, Yardley (UoA4), NIHR HTA, £2m); ACTIB trial of CBT for Irritable Bowel Syndrome (**Everitt,** HTA £1.2m); POWeR obesity management website trial (**Little** and Yardley, HTA £1.1m); Parents' management of childhood eczema website trial (NIHR post-doctoral fellow **Santer,** NIHR RfPB £340k); and the Alexander Technique and Supervised Physiotherapy Exercises (ASPEN) back pain trial (**Lewith** and **Little,** NIHR EME £230k).

We are based at Aldermoor Health Centre close to UHS and the analysis of our research is largely office based. We have no specific equipment needs, and we ensure all staff and students have access to a desk, desktop computer and relevant software. We have a database manager and draw on IT support from the University's iSolutions team at UHS.

e. Collaboration or contribution to the discipline or research base

National and international collaborations:

Little, **Williamson** and **Moore** have multicentre collaborations with UK primary care departments in infection, hypertension, and cancer research including Oxford, Bristol and Cardiff. **Thomas** collaborates on respiratory research with Aberdeen, Imperial, and Nottingham, and **Kendrick** on mental health research with York, Bristol, UCL and Liverpool. **Little** was work package (WP) leader for the EU GRACE respiratory infection consortium, working with Chief Investigator (CI) Goossens (Antwerp), main collaborators Verheij (Utrecht), and Butler (Cardiff), which provided the two largest randomised trials for acute respiratory infections to date centred in a large European primary care network. He was also WP leader for the linked Changing behaviour of Health care professionals And the general public towards a More Prudent use of anti-microbial agents (CHAMP) consortium (CI Verheij). This collaboration has extended to further joint EU grants including the R-GNOSIS consortium (CI Bonten, Utrecht). **Lewith** was one of three WP leaders and co-principal investigator (Co-PI) of the EU Framework 7 funded CAMbrella pan-European research network for Complementary and Alternative Medicine (2009-2012). He was also WP leader and Co-PI on the Framework 7 funded GP-TCM review of Traditional Chinese Medicine research, developing a genomically based research strategy and defining future priorities, in conjunction with King's College, London (2008-2011). He collaborates on funded research projects with Professors Jianping Liu (Beijing), Alan Bensoussan (Sydney), Claudia Witt and Benno Brinkhaus (Berlin), Klaus Linde (Munich), and Brian Berman (Maryland). **Leydon** collaborates with Professors Ross Lawrenson (Auckland), and John Heritage (UCLA), on funded projects.

Membership of grant funding boards and national research and development panels:

Little has been Director of the NIHR PGAR Board since January 2013, and a member and sub-panel chair since its inception. He has been an SPCR Board member since 2010, NIHR Strategy Board member since 2012, and NIHR Senior Investigator Award Panel member since 2013. He was the only GP member of the NIHR EME panel 2007-2011. **Lewith** has been a CAM consultant to the WHO and US NIH, a member of the RCP Integrated Medicine Committee 1992-2009, and the RCGP Complementary Medicine Committee 2008-2010. He is a member of the NCRI Clinical Studies Group on Complementary Medicine, and the Council for Natural Healthcare. **Kendrick** is Chair of the NIHR GP Academic In-Practice Fellowships Panel since 2013 (and member since 2009), a member of the NICE QOF Indicators Advisory Committee since 2009, and a Governor of the BUPA Foundation since 2005. He was a member of the NIHR Research Training Fellowships Panel 2000-2009 (and Chair 2006-2008), Co-Director of the Hampshire & Isle of Wight CLRN 2007-2010, a member of the NIHR HTA Diagnostics and Screening Technologies panel 2009-2011, and a member of the NIHR SPCR Board 2009-2010. **Thomas** is Research Chairman, International Primary Care Respiratory Group since 2011, and was a member of the Asthma UK Research Grants Committee, 2008-10. **Moore** was an NIHR Advisory Board primary care representative 2007-2012, and National Liver Strategy Group primary care and prevention subpanel member 2010-2011. **Leydon** is an NIHR PGAR selection panel member since 2007, and member of the HTA Expert Review College. **Mullee** is Director of the NIHR Research Design Service South Central, a member of the NIHR RfPB London Regional Advisory Committee since 2011, and RDS member of the NIHR Strategy Board since 2013.

Membership of editorial boards:

Little was Associate Editor for *Family Practice* and remains on the editorial board. **Kendrick** is a member of the *BMJ* primary care advisory panel since 2009 and was on the *Family Practice* editorial board 2007-2010. **Lewith** is on the editorial boards of the *European Journal of Integrative Medicine, eCAM, Complementary Therapies in Medicine, Journal of Complementary and Alternative Medicine,* and the *Chinese Journal of Integrative Medicine*. **Thomas** is the only GP member of the editorial board of *Thorax*, since 2010, and Associate Editor of the *Primary Care Respiratory Journal*, since 2010. **Raftery** is on the editorial board of *Health Technology Assessment* since 2012 and *International Journal of Technology Assessment in Health Care* since 2006. **Williamson** has been the GP editor for the Cochrane ENT group since 2007. **Leydon** is content and linguistic editor for the *Qualitative Sociology Review*, and was an editorial board member for the *European Journal of Cancer Care*, 2000-2009.

Markers of esteem:

Little is an NIHR Senior Investigator (on his second term, since 2009), and was elected a Fellow of the Academy of Medical Sciences in 2011. He served on the RAE 2008 Primary Care panel and is on the UoA2 panel for REF 2014. **Kendrick** received the President's Medal from the RCGP in 2009 for contributions to primary care research and was invited to give the RCGP George Swift Lecture in 2010. **Lewith** is past President and current Board member of the International Society for Complementary Medical Research and was Vice Chair of the College of Medicine 2010-12. He was a Visiting Scholar at the University of Western Sydney, and University of Traditional Chinese Medicine in Beijing, in 2012. **Thomas** was the first GP to be made an Asthma UK Senior Research Fellow, 2008-10**;** he was an invited speaker at the European Paediatric Association and Cochrane Child Health Field 2010 (London); the European Respiratory Society Annual Scientific Meetings in 2010 (Barcelona), 2011 (Amsterdam) and 2012 (Vienna); European Academy of Allergy and Clinical Immunology meeting, 2013 (Milan), and International Primary Care Research Group meeting, 2013 (Uppsala). **Raftery** was plenary speaker at the 2012 NICE conference; and visiting Professor, Tianjin Academy (China) since 2012. **Moore** is RCGP National Clinical Champion for antimicrobial stewardship since 2012 and an invited speaker at the National Conference on Addiction and the Liver 2011; the Irish College of General Practitioners Research and Audit Conference 2012 (Kilkenny); the Society for Academic Primary Care Annual Scientific Meeting 2012 (Glasgow); and the Primary Care Respiratory Society Annual Scientific Meeting, 2013. **Williamson** is a member of the GSK Otitis Media Advisory Board and was invited to speak at the NIHR/Lancet Infections meeting, 2013. **Leydon** was a Visiting Scholar at the Center for Language, Interaction and Culture, University College Los Angeles, 2012. **Dimitrov** was an invited speaker at the International Congress on Cardiovascular Diseases, 2013 (Sofia). **Yao** was invited speaker at the BioEconomy International Conference 2013 (Tianjin) and Dalian Medical School (China) annual workshop 2013; and Visiting Professor, University of California San Francisco, in 2011.