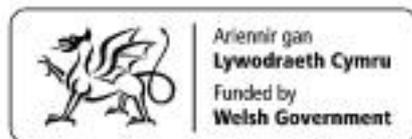




Canolfan PRIME **Cymru**
PRIME Centre **Wales**



2015-16
Annual Report





PRIME Centre Wales Leadership Team (left to right):

Richard Neal, Professor of Primary Care Medicine, Bangor University
& Associate Director, PRIME Centre Wales

Joyce Kenkre, Professor of Primary Care, University of South Wales
& Associate Director, PRIME Centre Wales

Helen Snooks, Professor of Health Services Research, Swansea University
& Associate Director, PRIME Centre Wales

Adrian Edwards, Professor of Primary Care, Cardiff University
& Director, PRIME Centre Wales

Table of Contents

Introduction	4
Work Packages	5
WP1. Long term conditions & co-morbidity	
<i>Leads: Professor Joyce Kenkre & Dr Carolyn Wallace</i>	5
WP2. Patient centred & prudent healthcare	
<i>Leads: Professor Adrian Edwards & Dr Fiona Wood</i>	6
WP3. Infections & antimicrobial resistance	
<i>Lead: Dr Nick Francis</i>	7
WP4. Screening, prevention & diagnosis in primary care	
<i>Leads: Professor Richard Neal & Dr Kate Brain</i>	8
WP5. Unscheduled and emergency (including pre-hospital) care	
<i>Lead: Professor Helen Snooks</i>	9
WP6. Patient safety	
<i>Lead: Dr Andrew Carson-Stevens</i>	10
WP7. Oral health & primary dental care	
<i>Lead: Professor Ivor Chestnutt</i>	14
Key Achievements	15
Partnerships, groupings and collaborations	15
Increasing research income into Wales	16
Key research findings	17
Translation / Knowledge transfer / Impact	18
Commercial and Industrial Collaborations	19
NHS Collaboration	20
Social care	22
Improving public involvement and engagement	23
Other Achievements	Error! Bookmark not defined.
Conclusions	26

Introduction

PRIME Centre Wales (Wales Centre for Primary and Emergency Care Research) aims to improve the health and well-being of people in Wales and beyond, by conducting high quality research on topics of national policy priority in primary, emergency and unscheduled care.

In April 2015, Health and Care Research Wales awarded funding of £2.7M over 3 years to the research team led by Professor Adrian Edwards at Cardiff University, alongside partners Professor Richard Neal at Bangor University, Professor Helen Snooks at Swansea University, and Professor Joyce Kenkre at the University of South Wales. A further £0.9M was added (“matched funding”) by the four universities involved.

The funding supports PRIME Centre Wales work to generate a **strong evidence base** for policies, interventions and service improvements, and implementing findings across the various relevant disciplines which include community nursing, dentistry, general practice, occupational therapy, pharmacy, physiotherapy, social care, emergency, pre-hospital and unscheduled care.

Research in this area is crucial as 90% of people’s contacts with the NHS takes place in the community, rather than in hospital. With an ageing population, the numbers of people with **complex health and social care problems** is increasing. Strong primary, emergency and unscheduled care are essential to an effective and efficient health service. It is vital that these are supported by strong evidence, which PRIME aims to deliver.

The centre builds on existing areas of scientific excellence in Wales with core **research themes** centred on long term conditions, patient centred and prudent health care, infections and antibiotic resistance, emergency and unscheduled (including pre-hospital) care, dental health, patient safety and health care improvement, as well as screening, prevention and early diagnosis.

PRIME Centre Wales has built on collaborations with **key partners** from the general public (lay members) and in the third sector including Age Alliance Wales, Age Cymru Gwent, British Lung Foundation, Care Forum Wales, Gwalia, with representation from the sector at PRIME Centre Wales public events held and as membership of the Executive Committee and Faculty. Engagement with these stakeholders has been essential in informing the Centre’s research priorities and plans, particularly in the areas of social care, and long-term conditions and co-morbidity. The PRIME Centre Wales 1st Annual Meeting **‘Primed for Research - Collaborate, Listen, Engage’** was held in September 2015. Supported by the Minister for Health and Social Services, and Chief Nursing and Medical Officers, this brought together primary and emergency care researchers and stakeholders and was a stimulating forum to share areas of research strength, identify opportunities for collaboration, and inspire both researchers and public to participate. Principal activities and achievements will now be summarised.

Work Packages

WP1. Long term conditions & co-morbidity

Leads: Professor Joyce Kenkre & Dr Carolyn Wallace

A **consensus meeting** was convened in November 2015 with service users, members of academia, government, statutory and third sector to identify **Long Term Conditions research priorities for Wales**. The purpose of the meeting was to capture the research issues brought from the participating organisations and individuals, prioritise these and establish how they can be effectively delivered. With information sharing at the meeting and consensus agreement methods such as nominal group techniques, priorities were drafted and have gone out for consultation.

The identified themes are as follows:

- Data sharing infrastructure and technology
- Self-management
- Sector and service access and transitions
- Workforce, roles and community
- Interventions and outcomes
- Assessment and tools
- Research Engagement and capacity building

Across the Health Boards in Wales, WP Leads Kenkre and Wallace have facilitated **master classes in research for nurses**, also to set priorities for research that they can take forward. They have instigated the registration of research being conducted by nurses for their Masters dissertations and other higher degrees, with a vision of co-ordination of research to meet the needs of the Health Boards.

Kenkre and Wallace have also facilitated the development of a research strategy for **occupational therapists** in Wales and are supporting its implementation. Support has also been provided in developing a research strategy for **community pharmacists** in Wales who are now linked into the Research Capacity Building (PhD) Collaboration funding.

Extensive work has been undertaken with industry partners in the development and support for research initiatives in Wales. We are raising the profile among practicing professionals of the need to develop new equipment for delivery of primary and unscheduled healthcare in the future, and how we can assist in idea development, intellectual property (IP) and linking with industry. This includes the European funded Knowledge Economy Skills Scholarships funding streams.

PRIME co-applicants Alun Preece, Robert van Deursen and colleagues making up an interdisciplinary team of health care professionals and researchers, computer scientists, and app developers developed the TRAK app suite - a web-based intervention for delivering standard care for the rehabilitation of knee conditions. The key functionality of the app includes information provision, a three-step exercise program based on a standard care for the rehabilitation of knee conditions, self-monitoring with visual feedback, and a virtual support group.

WP2. Patient centred & prudent healthcare

Leads: Professor Adrian Edwards & Dr Fiona Wood

Patient Centred and Prudent Health Care draws on the philosophy of patient empowerment and engaging patients and members of the public in health and health care. Prudent Healthcare is a flagship health policy of the Welsh government which aims to change the way valuable resources in the NHS are used and provided.

Over the last year our priority areas have been: (i) Shared Decision Making (SDM) & Decision Aids (ii) Self-management support & health literacy (iii) Prudent Healthcare. Across these three priority areas we have been successful in winning grant funding, high impact publications and new PhD students.

i) Shared decision making and decision aids

We have completed a trial of an Option Grid decision aid to evaluate the efficacy of SDM in socially disadvantaged and elderly populations (with arthritis). Shared decision making increased when clinicians used the decision aid, and the findings have been reported in a scientific journal. Other publications which focus on patients' and clinicians' views about the decision aid are currently under review in scientific journals.

Other notable achievements include Natalie Joseph-Williams completing her PhD on Shared Decision Making and joining the PRIME research team in February 2016. Natalie is also working with Bristol University in the set up phase for a decision aid study for **cataract surgery**. Natalie will be the principal investigator for the Cardiff site. We have also advertised a PhD

studentship to start October 2016 to develop a theory based intervention to prepare young people to participate in shared decision making about their healthcare. Over the last few months we have also been working with Aneurin Bevan Local Health Board to develop a study to evaluate shared decision making in the orthopaedic referral and management pathway for patients with **osteoarthritis of the knee**.

ii) Self-Management support & health literacy

Our work in this area includes a PhD study which started in October 2015 on how clinicians can support patient with **long term neurological** problems to self-manage their condition (Dr Freya Davies). Freya has also been successful in obtaining small grant funding from the RCGP Scientific Foundation Board to support this work. A team, led by Adrian Edwards and Rhiannon Phillips has also submitted a research bid to evaluate a health literacy based self-management support programme for people with **multi-morbidity**.

iii) Prudent Healthcare.

We secured funding from Health and Care Research Wales to explore public and clinicians' views of, and participation in, Prudent Healthcare. We will interview Welsh NHS clinicians about what Prudent Healthcare means to their specialist area and profession, and how they have tried, or might try, to embed it into **everyday practice**. We will also interview members of the public, including those who consider themselves to be regular users of the NHS and carers, about what a Prudent NHS might mean for them, including taking responsibility for their own health.

WP3. Infections & antimicrobial resistance

Lead: Dr Nick Francis

This work package develops and delivers high quality research that focuses on improving the management and complications of infections. A key aspect of our work is on **appropriate use of antibiotics** so that only those patients who are likely to benefit are treated with antibiotics, to try to limit the development of antibiotic resistance and the threat that this poses.

PRIME is leading and co-leading a number of high-profile national and international studies. The CREAM trial of the effects of antibiotics in children with **infected eczema** found that antibiotic treatment did not significantly improve eczema severity. The results have been presented at several national and international meetings, including the International Symposium on Atopic Dermatitis in Sao Paulo, Brazil. PREPARE is a large EU funded research programme to develop a clinical research framework for research on **infectious disease pandemics**. We co-lead two work packages, and both have made good progress, with findings presented recently in Madrid.

OSTRICH, PACE, CEDAR and PRINCESS are on-going funded trials. OSTRICH is assessing the effectiveness of steroid treatment for **children with glue ear**, and is on track. PACE is evaluating use of a new 'bedside' test to help determine whether people with **chronic obstructive pulmonary disease** need antibiotic treatment. CEDAR is a trial to see if pain killer drops can safely reduce antibiotic use of children with **ear**

infections. PRINCESS is a trial of using probiotics to prevent infections in **care home residents**.

In addition, we have submitted 14 research grant applications on a variety of infection-related topics, including diagnosis of urinary tract infections, novel testing for bacterial throat infections, prevention of cellulitis, pre-hospital treatment of sepsis, improving antibiotic use in dentistry, and improving public understanding of antibiotic resistance and appropriate use of antibiotics. So far, we have been successful in being awarded 3 new grants totalling £284K this year.

A key objective is to develop capacity, and we have a number of junior researchers who are submitting funding applications and publishing. We also have two PhD students progressing well.

We have an active research team and have weekly team meetings. We collaborate extensively with **national and international colleagues** and have presented at a number of international meetings. We have recently been seeking to develop new collaborations with more basic scientists, and have a workshop planned on 'Infection in Population Health' with the Systems Immunity University Research Institute in Cardiff University.

We continue to work closely with PPI representatives, both as part of the teams delivering our funded studies and in putting together new applications. Recent press releases regarding results of our CREAM study and a study of a viral skin condition (*molluscum contagiosum*) were picked up on social media and other outlets.

WP4. Screening, prevention & diagnosis in primary care

Leads: Professor Richard Neal & Dr Kate Brain

Prevention, Screening and Early Diagnosis focuses on significant public health problems and inequalities in Wales, continuing strong work in cancer and addressing other priority health areas. Our aims are to: (i) develop strategies to prevent obesity related disease and reduce harm from tobacco, (ii) increase public awareness and improve equitable uptake of screening programmes, and (iii) expedite early diagnosis.

Over the last year, our priority areas have focused predominantly on expediting early diagnosis of cancer, increasing public awareness of cancer symptoms, and developing work to improve equitable uptake of cancer screening programmes. Within these areas, we have been successful in winning project and programme grant funding totalling £3.3M, and publishing high impact publications. Our work has been hugely supported by the appointment of Steph Smits in Cardiff (joint post with Wales Cancer Research Centre) and the input of PRIME Centre staff Julia Hiscock and Ruth Lewis in Bangor.

i) Expediting early diagnosis of cancer
 Programme grant funding has been secured for 'WICKED' (Wales Interventions and Cancer Knowledge about Early Diagnosis): The development and evaluation of primary care interventions to **expedite the diagnosis of symptomatic cancer** in Wales (CI: Neal, with co-applicants in Bangor, Cardiff (Brain, Carson-Stevens), and other universities in England, Denmark and Australia; Cancer Research Wales funding).

We have completed the ELCID feasibility trial of an intervention to enhance early investigation of **cough as a potential symptom for lung cancer**, and a paper from this has been submitted. A trial of the ELCID intervention in routine practice is now being planned. Further analysis of the UK Lung Screening trial has been completed, with a key paper reporting long-term psychosocial outcomes of CT scan **lung cancer screening** now accepted in the journal *Thorax*, and a further two papers about to be submitted.

Two studies of diagnostic pathways (one for sarcoma, and one for prostate cancer) have been submitted and decisions are pending. Funding for Welsh participation in Phase II of the **International Cancer Benchmarking Partnership** has been secured from Welsh Government monies to support the Cancer Delivery Plan. A steering group has been established, and met twice, to oversee Welsh participation in the (UK) National Cancer Diagnosis Audit.

ii) Increasing public awareness of cancer symptoms

We are continuing work on the Cancer Research UK-funded ABACus (Awareness and Beliefs About Cancer) project, which developed and is evaluating a targeted behaviour change intervention to **increase cancer awareness** and encourage timely help-seeking among adults **in deprived areas** of Wales. An intervention development paper has been submitted for publication, and we are planning a multi-centre trial in a range of deprived communities in Wales and England.

As part of the **Welsh Lung Cancer Initiative**, we have provided expert advice to Welsh Government and Public Health Wales on

the development of the Welsh lung cancer awareness campaign materials (due for roll-out in July 2016) and campaign evaluation methods. Two grant applications have been submitted to develop and pilot a targeted lung cancer awareness intervention for high risk, harder to reach groups.

A stakeholder workshop was convened in February 2016 (PI: Steph Smits) to engage key clinical, policy and third sector partners in knowledge transfer regarding the **ovarian cancer** symptom awareness tool and discuss potential routes to implementation. We also met the Minister for Health and Social Services in March 2016 to discuss public awareness of ovarian cancer symptoms.

iii) Developing work to improve equitable uptake of cancer screening programmes

We have supported Sunil Dolwani (WCRC) in developing his research in bowel cancer screening, with a focus on addressing multi-morbidities. Two grant applications have been submitted, along with two aligned fellowship applications (Steph Smits). A CRUK Early Diagnosis Innovation Grant has been secured (PI: Sunil Dolwani, with co-applicants in PRIME).

WP5. Unscheduled and emergency (including pre-hospital) care

Lead: Professor Helen Snooks

This has been a busy and successful year for the unscheduled and emergency care work package. Our active engagement in research has continued to build on core themes of interest around **alternative care pathways** and reductions in ambulance conveyance to the emergency department;

linkage of **routine data**; use of tools in primary care to **predict risk** of emergency admission; adoption and implementation of **new technology** and working practices in prehospital care; and conduct of research in a prehospital context, including the role of patients and service users in the planning and conduct of research.

During this year we submitted final reports for two major studies: the SAFER2 trial of alternative care pathways for older people who fall, and the PRISMATIC evaluation of a predictive risk tool in primary care.

During this year, we worked with a range of collaborators to secure new funding of £2,270,534 in total, of which £1,567,691 came to the group. New research projects include the ERA study of the role of **electronic records in ambulances** (NIHR HS&DR); PHED Data, examining the potential value of linking routine data from ambulance services and acute trusts (Health Foundation); TIER, a feasibility study of a prehospital care pathway for patients with low risk **transient ischaemic attack** (RfPPB); RAPID, a feasibility study of pre-hospital analgesia for patients with **hip fracture** (RfPPB) and the associated PAPHiF study (WAST); and NEAT, a study of ethics in pre-hospital research (Wellcome Trust). We await funding decisions on further studies.

In developing and delivering bids, we have continued to strengthen existing **collaborations with academic and health service partners** within and beyond Wales, as well as developing new collaborations with UCL and the University of Aberdeen. The Swansea Trials Unit is now fully registered with the UKCRC and we look forward to continuing to collaborate strongly. We have actively engaged with NHS organisations, including successfully bidding to NHS England/ Health Education

England to provide evaluation support for projects funded through the NHS111 Workforce Improvement Programme.

We have consolidated our researcher team, including welcoming Dr Ashra Khanom. Existing team member Dr Bridie Evans was awarded her PhD this year, and we are continuing to develop research capacity locally through the PhD studies of Jenna Bulger and Mark Kingston (both Swansea University team members) and Nigel Rees and Chris Moore (WAST).

Our programme of dissemination and engagement has included, in addition to presentations at national and international conferences, the organisation of two research events. Jointly with Health Services Research UK, we hosted an autumn seminar on **research impact** in Swansea, attended by delegates from across the UK. In March, jointly with the North East Ambulance Service, we delivered the annual **999EMS Research Forum conference** in Newcastle, attracting a hundred research-active paramedics and academics.

WP6. Patient safety

Lead: Dr Andrew Carson-Stevens

Over 90% of care encounters are delivered in primary care in the UK. However, very little is known about the safety of its delivery. As other nations transition to, and emulate, predominantly primary care-led care models like the UK, we need to understand healthcare-related harms arising from existing practices before they are replicated elsewhere. Most patient safety research has focused on specialist-care settings where we now understand much of the frequency and causes of harm, and interventions have been developed and

implemented in practice. The pace of patient safety research in primary care has been slower. In recent years, the profile of patient safety (and research) in primary care is increasing through the World Health Organization's (WHO) Safer Primary Care Expert Group, and more recently by the US National Patient Safety Foundation's call to look "beyond hospitals to the full care continuum".

The PRIME Patient Safety work package aims to:

- determine the frequency and burden of unsafe primary care;
- advance the epidemiological methods to examine patient safety in community settings;
- generate learning from the patient safety incidents that have occurred to patients;
- develop, test and implement interventions for safer care developed with stakeholders; and,
- support the building of capacity and capability of the primary care workforce to lead improvements in care quality and safety.

To work towards achieving those aims, and establishing a world class research reputation in the field of patient safety, we have commenced several core streams of work within the first year of PRIME Centre Wales, including the: epidemiology of avoidable significant harm in general practice; identifying priority areas of practice improvement for patient groups at increased risk of patient safety incidents; development of quality improvement educational resources for primary care; and, supporting professional development of patient safety health service researchers.

Epidemiology of avoidable significant harm

Few large-scale studies have investigated the frequency, burden and preventability of harm in primary care. A recent World Health Organization-commissioned systematic review, co-authored by Carson-Stevens, included just nine systematic reviews and 100 primary studies. Meta-analysis of robust studies suggests 2-3% of primary care encounters involve a healthcare-related error, and around one in 25 of those result in a significant harm outcome with substantial impact on a patient's well-being. However, included studies were notably very variable in study design and inconsistent in their definitions of outcome measures. Thus, multi-method studies are still needed to provide **more robust evidence of the problem**.

The *Department of Health Policy Research Programme* has funded a study to determine the frequency and burden of significant avoidable harm in general practice in England. The Primary Care Patient Safety (PISA) Research Group at Cardiff University has led Phase 1 of the study and completed a modified Delphi / UCLA consensus process to establish a standardised set of definitions for consistent identification of healthcare-related harms in primary care and comparisons across settings, countries and over time. This work represents **major methodological advancement** for current and future primary care patient safety research. Phase 2 (coordinated by the University of Nottingham, with informatics support and training of case note reviewers provided by the PISA Research Group) will commence in June 2016 and involves case note review of 100,000 patients from 16 general practices across England.

Identification of patient safety priorities for at risk patient groups

The NIHR HS&DR funded "PISA Study" concluded in June 2015 and highlighted the major reported causes for the most frequent and harmful safety incidents reported from general practice in England and Wales. This is the largest characterisation of identified unsafe care internationally and has enabled the PISA Research Group to identify the strengths and improvement opportunities for patient safety incident reporting in primary care. These findings have been highlighted in publications (original articles, commentaries and research letters) in *The Lancet*, *BMJ*, *Pediatrics*, *BMJ Quality and Safety*, *Vaccine*, *Archives of Disease in Childhood*, *Human Vaccines and Immunotherapeutics*, *British Journal of General Practice* and *BMJ Open*. We have entered discussions with Welsh Government and 1000 Lives Improvement about using these research findings to inform the design of primary care **improvement initiatives in Wales**.

Further research is underway to characterise reports describing patient safety incidents in **other primary care settings**. We have established research collaborations with the University of Nottingham (with Prof Tony Avery, Dr Matt Boyd, and Prof Justin Waring) and the University of Edinburgh (with Prof Aziz Sheikh Dr Kathrin Cresswell). Carson-Stevens co-supervises three PhD students exploring patient safety in **community pharmacy** or ambulatory **dentistry**, and we are preparing and have submitted several research proposals. Within Wales, we are **developing research partnerships** to secure competitive fellowship and doctoral funding with colleagues from the All Wales Therapeutic and Toxicology Centre (Mr Jamie Hayes and Prof Phil Routledge) and

the Community Nursing Research Strategy Group at the University of South Wales (Dr Carolyn Wallace and Prof Joyce Kenkre).

Quality improvement educational resources for primary care

The PISA Group at Cardiff University (Carson-Stevens, Edwards) has been selected by the Royal College of General Practitioners to lead on a Patient Safety priority (“*Spotlight Award*”) within the college to promote and enable GPs and their teams to improve the quality and safety of the care they provide for patients.

The PISA Group, with support from its partners (PRIME Centre Wales working with the All Wales Therapeutics and Toxicology Centre; Universities of South Wales, Manchester, Nottingham, Edinburgh), will develop a series of educational resources and dissemination events (from January 2017 onwards) to promote and enable the design of safer primary healthcare. We envisage that the **e-learning modules** will be adopted for inclusion in appraisal, revalidation and trainee portfolios to demonstrate knowledge and understanding of quality improvement, and importantly how to apply the methods in general practice.

Professional development of patient safety health service researchers

The PISA Research Group has supported the professional development of early career researchers by hosting Associate Academic GP Fellows, Academic Foundation Year 2 doctors, medical students in the Division of Population Medicine at Cardiff University; and academics from other schools in Cardiff University. We are currently exploring methods to support patient safety research capability and capacity building with collaborating academics at other institutions in PRIME Centre Wales.

To prepare our researchers to deliver world class patient safety research, they join a supportive, multidisciplinary PISA Research Group, and receive **quality improvement methods and healthcare human factors training**. Each researcher is typically assigned their own project to lead with weekly coaching from a more experienced investigator. After one year of working with the PISA Group, it is typical for our researchers to have more than one peer-reviewed publication, have made a national and (often) international presentation, and to have presented their work to world experts in the field and key stakeholders such as Welsh Government. We anticipate this will enable our emerging early career researchers to be competent principal investigators with strong, competitive resumes to secure competitive future opportunities (funding, fellowships, awards).

Visiting academics also support capability and capacity building through contributions to the academic programme at the School of Medicine, Cardiff University, have given popular and well-attended public lectures, and provided expert guidance and feedback to our researchers. In November 2015, Cardiff University awarded the international champion for patient safety and public health, Professor Sir Liam Donaldson, a prestigious Honorary Distinguished Professorship. Sir Liam, the World Health Organization Envoy for Patient Safety and former Chief Medical Officer of England (1998-2010), gave a public lecture entitled “Patient safety: today’s challenges, tomorrow’s opportunities” to an audience of over 200 stakeholders including researchers, policymakers, educators, healthcare professionals and students in Cardiff on November 10th 2015. The lecture

is available through the following link:
<http://www.primecentre.wales/sir-liam-donaldson-lecture.php> We have also welcomed or have approved nine international academics to visit from other institutions, including from Harvard University, Boston USA; the University of British Columbia, Vancouver, Canada; and Macquarie University, Sydney, Australia.

WP7. Oral health & primary dental care

Lead: Professor Ivor Chestnutt

This workpackage delivers high quality research in the area of oral health and primary dental care. The main areas of interest are (i) oral health improvement and preventive dental technologies; (ii) the use of antibiotics in primary dental care; (iii) prudent healthcare in dentistry.

Oral health improvement and the performance of preventive dental technologies

The NIHR HTA funded “Seal or Varnish?” clinical trial completed successfully and the draft final report is currently with NIHR. A dissemination plan for the findings has been developed and will be delivered in the next 12 months.

Two bids in this area are under consideration by the NIHR HTA programme to examine (i) the use of high dose **fluoride toothpaste in older people** attending dental practices (at outline stage) – (ii) the use of **SMS messaging to encourage oral hygiene** practices in adolescents (full submission). A third bid relating to oral care in care homes is in development for submission for funding.

The use of antibiotics in primary dental care

We have continued to publish work in this area and funding is being sought for a further developed project. We have been successful in a bid to fund the time of a specialty trainee to work in this area under the Clinical Research Time Award Scheme.

Prudent healthcare in dentistry

A project on appropriate **skill-mix in dentistry** in Wales is progressing to schedule and the first stage results will be presented at an International meeting in

September. We have explored the **Quality Assurance** system used to monitor General Dental Practices in Wales and a report has been submitted to Public Health Wales.

Key Achievements

Partnerships, groupings and collaborations

The funding for PRIME Centre Wales has been instrumental in the extension and enhancement of collaboration between Welsh universities, and across clinical and research disciplines building on the strong records of the former Wales School for Primary Care Research (WSPCR) and Thematic Research network for emergency, UnScheduled and Trauma care (TRUST).

Integrating the teams has strengthened research excellence in primary, emergency and unscheduled care, essential for delivering an internationally relevant evidence base for innovative service developments across traditional service boundaries.

Since inception in April 2015, PRIME has led in the development and submission of a number of successful external funding applications for projects with collaborative teams including researchers from across the four partner universities and beyond including:

- i. [A qualitative study of public and clinicians' views of, and participation in, Prudent Healthcare.](#)
£245,000, Health and Care Research Wales. 01/10/2015 – 31/07/2017.
PI: Dr Fiona **Wood** (Cardiff University)
Co-applicants: Prof Adrian **Edwards** (Cardiff University), Prof Joyce **Kenkre** (USW), Prof Helen **Snooks** (Swansea University), Prof Richard **Neal** (Bangor University), Dr Deborah Clayton (Cardiff Metropolitan University), Prof Donna Mead (Cwm Taf Health

Board)

**** All 4 PRIME university partners contributing, engaging with NHS ****

- ii. [TIER - Transient Ischaemic Attack 999 Emergency Referral: feasibility trial.](#) £229,139, Health and Care Research Wales. 01/10/2015 – 30/09/2017.
PI: Mr Nigel **Rees**, Head of Research & Innovation Welsh Ambulance Service NHS Trust (WAST)
Co-applicants/collaborators: Prof Helen **Snooks** (Swansea University) Dr Richard Dewar (Cwm Taf Health Board), Prof Adrian **Edwards** (Cardiff University), Chris Moore (Welsh Ambulance Services NHS Trust), Dr Alison **Porter** (Swansea University), Dr Bernadette Sewell (Swansea University), Dr Alan Watkins, (Swansea University), Shirley Whitman (Patient representative), Dr Anne Seagrove (Swansea University), Dr Jenna Bulger (Swansea University)
**** NHS led, working with 2 PRIME university partners ****
- iii. [Morbidity following urinary tract infection in young children: an electronic record-linked cohort study.](#)
£250,000, Health and Care Research Wales. 01/10/2015 – 30/09/2017.
PI: Dr Kathy **O'Brien** (Cardiff University)
Co-applicants: Prof Chris Butler, (Oxford University), Dr Rebecca Cannings-John (Cardiff University), Dr Nick **Francis** (Cardiff University), Prof Alistair Hay (Bristol University), Prof Kerry **Hood** (Cardiff University), Prof Will Hollingworth (Bristol University), Prof Shantini Paranjothy

(Cardiff University).

**** PRIME led, collaborating with South East Wales Trials Unit, Population Health Centre, and others ****

iv. 'WICKED' (Wales Interventions and Cancer Knowledge about Early Diagnosis): The development and evaluation of primary care interventions to expedite the diagnosis of symptomatic cancer in Wales.

£800,000, Cancer Research Wales Programme Grant.

PI: Richard **Neal** (PRIME, Bangor University)

Co-applicants:

Bangor: Clare **Wilkinson** (PRIME), Ruth **Lewis** (PRIME), Julia **Hiscock** (PRIME), Maggie Hendry, Nefyn **Williams** (PRIME), Brocklehurst, Zoe Hoare, Rhiannon Tudor Edwards, Joanne Rycroft-Malone
Cardiff: Kate **Brain** (PRIME), Andy **Carson-Stevens** (PRIME), Sunil Dolwani

Exeter: Willie Hamilton

University College London: Georgios Lyratzopoulos

Durham University: Greg Rubin

Cambridge University: Fiona Walter

**** 2 PRIME partners making internationally competitive bilateral collaboration ****

These examples show how PRIME brings together research expertise across the partner universities and collaborators, interfacing with other Health and Care Research Wales infrastructure and others, to strengthen research excellence, and facilitate ongoing development of further collaborative work. Awards in 2015-16 reflect work that started before PRIME

funding, but are directly the outcomes of the work of previous infrastructure funding – i.e. WSPCR and TRUST – and also reflect the close collaboration that developed in preparation (and funding application) for PRIME in 2014-15.

Increasing research income into Wales

Funding of PRIME researchers has also enabled us to lead the development and submission of successful project funding applications to UK national funders including:

i. ERA - Electronic Records in Ambulances to support the shift to out of hospital care: challenges, opportunities and workforce implications.

£308,318, NIHR. 01/01/2016 – 31/12/2018.

PI: Alison **Porter** (PRIME, Swansea University); Co-applicants: Niro Siriwardena (University of Lincoln), Helen **Snooks** (PRIME, Swansea University); Co-applicants: Bridget Wells (Swansea University), Henry Potts (University College London), Suzanne Mason (University of Sheffield), Jeremy Dale (University of Bristol), Robin Lawrenson, (Scottish Ambulance Service), Robert **Harris-Mayes** (Service User), Ronan Lyons (Swansea University), Sarah Black, (South Western Ambulance Services NHS Foundation Trust), Mr Richard Whitfield (WAST), Zoe Morrison, (University of Aberdeen).

**** PRIME team leading internationally recognised collaborators ****

Further cross-institutional team applications have been submitted to UK national

fundes, currently awaiting outcomes including.

Key research findings

- The NIHR funded PRISMATIC study found that implementation of Predictive Risk Stratification by general practices enables selection of patients for case management and **prevention of emergency admission**: fewer admissions were observed in those at the highest level of risk, and overall time spent in hospital was reduced.
<http://bmjopen.bmj.com/content/6/3/e009653.full>
- HTA funded SAFER 2 (emergency care of older people who fall) changing practice in the emergency care of **people who fall**.
<http://trialsjournal.biomedcentral.com/articles/10.1186/s13063-015-0821-z>
- Achieving Shared Decision Making for people in disadvantaged communities (TOGA trial, BUPA funded): decision aid for **arthritis** and brief shared decision making training resulted in greater patient involvement in decisions.
<http://www.sciencedirect.com/science/article/pii/S0738399115300926>
- NIHR funded PISA study of patient **safety incidents in primary care**: key areas for improvement around medication errors, especially prescribing, communication failures from incomplete or non-transfer of information including referrals and discharge letters and clinical decision making – areas for improvement priorities, and method for incident analysis developed and being used in England.
<http://bmjopen.bmj.com/content/5/12/e009079.abstract>
- CREAM trial of the effects of antibiotics in children with **infected eczema** found that antibiotic treatment did not significantly improve eczema severity.
<http://www.journalslibrary.nihr.ac.uk/hta/volume-20/issue-19>
- The Diagnosis of Urinary Tract infection in Young Children (DUTY) study found that **inappropriate antibiotic prescribing for the treatment of UTI in children** was relatively common, and methods for improved targeting of antibiotic treatment in children who are acutely unwell are urgently needed.
<http://bjgp.org/content/65/633/e217.10ng>
- Module 3 of the International Cancer Benchmarking Partnership **demonstrated that readiness of GPs to investigate patients with potential cancer symptoms** was one of the reasons that explains cancer survival differences between countries.
<http://bmjopen.bmj.com/content/5/5/e007212.full>
- The ELCID (Early Lung Cancer Investigations and Diagnosis) feasibility trial showed that people at higher **risk of having lung cancer** and presenting with new respiratory symptoms to their GP are willing to enter a trial and be randomised to receive an urgent cancer test (chest x-ray) or usual care. A phase III trial is in planning.
<http://thorax.bmj.com/content/71/2/161.long>
- The APICAL retrospective cohort study found that **consultation rates for dental problems in UK general practice** are relatively low but more than half result in an antibiotic prescription, raising concerns about patient morbidity and contributions to antimicrobial resistance.

<http://bjgp.org/content/early/2016/03/28/bjgp16X684757>

Translation / Knowledge transfer / Impact

- The “When Should I Worry?” tool/ booklet reduced antibiotic prescribing for **respiratory tract infections in children** by 66%, and the tool is now widely used in the NHS and globally. The www.whenshouldiworry.com website includes training for clinicians and downloads of the booklet, both free of charge; printed versions of the booklet are available through the RCGP Bookshop at cost price, with over 230,000 hard copies of the booklet purchased for use in the NHS, and over 71,000 website page views from Jan 2014 -March 2016.
- Designed to Smile (D2S) oral health improvement programme has been rolled out across Wales; the latest survey of 5 year olds undertaken 2014-15 shows a 6% reduction in the proportion of **children with dental decay** in Wales, compared with 41.4% falling to 35.4% in 2011-12
- Results from two psychosocial evaluations of cancer screening have contributed to policy proposals to the UK National Screening Committee regarding the introduction of population-based **lung and ovarian cancer screening**.
- The **International Cancer Benchmarking Partnership** research has also been presented at a range of public and policy events including workshops and public talks for the South Wales Cancer Network Annual Patient Conference and Tenovus Cancer Care.
- PISA study findings are the basis for work with Public Health Wales and 1000 Lives Plus for prioritising **patient safety initiatives** in primary care in Wales
- Model for **Shared Decision Making training** (MAGIC studies, Cardiff) is being rolled out by 1000 Lives Plus to Health Boards across Wales.
- International application of Snooks’ **evidence that telephone advice, decision support and referral pathways** are safe and effective has reduced unnecessary attendance at Emergency Departments and costs without compromising patient experience, safety or quality of care.
- Support provided to Integrated Care Team staff in Powys to develop **Integrated Care Strategy** for Healthy Living Centre
- PRIME’s **model for public and patient involvement** (building on SUCCESS experience from TRUST) is an exemplar for researchers elsewhere, and has been disseminated via national (UK) meetings.
- Patient Safety: the Royal College of General Practitioners made a “Spotlight Award” (2016) to the **Primary Care Patient Safety (PISA)** Group at Cardiff University to run stakeholder events in each of the four UK countries; activities at the events seek to identify priorities for primary care patient safety research and development. We are also working with Public Health Wales and 100 Lives Plus to identify improvement initiatives for highest priority in primary care in Wales.
- The ‘FRAIT’ standardised **family resilience assessment tool for health visitors** has been tested in practice in Abertawe Bro Morgannwg, Hywel Dda, Aneurin Bevan and Cwm Taf Health Boards, and will be used in practice across all of Wales from Autumn 2016.

- **Mixed-methods study to develop a patient complexity assessment instrument for district nurses** (PhD study led by Sue Thomas, with lead supervisor Carolyn Wallace) found that GCM is a suitable consensus method for use in nursing theory and developing instruments. It proved successful in achieving consensus with no loss of participants' views and there are now plans to translate the approach of developing the complexity instrument into an instrument for **care homes for Cwm Taf** University Health Board.

Commercial and Industrial Collaborations

PRIME Centre Wales researchers continue to work with Health and Care Research Wales, and are committed to undertaking work with commercial partners in primary, community and emergency settings. Commercial and industrial research partners have been included in invitations for our stakeholder events this year, with the following in attendance:

- Artis Community
- Europe Qualcomm Life
- TBS GB - Telematic & Biomedical Services
- The Office Choir Company
- Online Architecture Ltd

PRIME also retains strong links with South East Wales Academic Health Science Partnership (SEWAHSP), with Joyce Kenkre, PRIME Associate Director, also a member of the SEWAHSP Board. In 2016, Professor Kenkre has also been appointed to the Advisory Board for TBS UK, leading specialists in the provision of healthcare technology management delivering bespoke solutions to the healthcare sector.

PRIME researchers have been actively engaging with potential industrial and commercial partners, at events including BioWales 2016, and SEWAHSP Annual Conference, Cardiff City Stadium, for which Joyce Kenkre provided a presentation provided: 'Academic reflection on collaboration'.

Such engagement activities have led to discussions currently underway with multiple prospective partners (Sony, Renishaws, GE Healthcare, Cutest, TBS GB) regarding collaborative funding applications (COPD project; INR project; KESS2 studentships; external funding and co-supervision for MRes and PhDs). Talks are also taking place with MSD regarding a diabetes project based at Cwm Taf UHB.

Funding applications developed with commercial and industrial partners this year include:

Title: A new approach to tackle cancer caregiver stress and burnout

Applicants: Joyce **Kenkre**, **Biovici** (Industry co-applicant)

Proposed funder: Tenovus

Commercial/industrial collaboration

summary: Due to their role caregivers often do not look after their own health and welfare as they focus on those they are looking after. A near patient test for Cortisol may give an early **indication of stress in the caregiver** that could prompt support for them. Biovici have developed such a test. The company are also developing new saliva tests for biomarkers of certain cancers.

Title: Cancer in care homes: Scoping the knowledge and use of equipment in the treatment and care of residents.

Applicants: **CME Medical** (Industry Led),
Joyce **Kenkre**, Carolyn **Wallace**
Proposed funder: Tenovus

Title: Activity recognition with Smart-
phones - Towards better care in the
community for people with mild to
moderate **symptoms of dementia**.

Applicants: Joyce **Kenkre**, Carolyn **Wallace**,
CEMAS / Design Connect Wales.

Proposed funder: KESS2

Title: Expression of Interest: National
Technology Adoption Hub

Applicants: CEDAR (Dr Grace Carolan-Rees),
SEWAHSP (Dr Corinne Squire)

Contributors: SCHE (Pippa Anderson), SMTL
(Pete Phillips), Bill Mapleson Centre (Prof
Judith Hall), NWIS (Mike Ogonovsky),
Swansea University (Kevin Fernquest),
Clinical Innovation Cardiff (Prof Ian Weeks,
Mr Jared Torkington), **PRIME Centre Wales**
(Joyce **Kenkre**), School of Healthcare
Science, Bangor University (Nefyn
Williams), **MediWales** (Gwyn Tudor)

Proposed funder: Welsh Government

Title: Pilot evaluation of the 'Ask Us Cancer
App' - a cross-platform app for cancer
patients to support patient activation and
communication with clinicians in
consultations

Applicants: Rebecca Richards, Fiona **Wood**,
Kate **Brain**, Paul Kinnersley, John Staffurth
(PRIME / Cardiff University)

Proposed funder: **Tenovus** Cancer Care
iGrant

Summary: collaborating with Digital
Morphosis for technological development
to support **cancer care communication**.

NHS Collaboration

PRIME Centre Wales researchers routinely
work with NHS partners in the design and
delivery of research projects. In addition,

PRIME researchers are also active in
supporting NHS clinicians to become more
involved in research, and thus increasing
research capacity and improving quality of
research collaboration with the NHS.

Community Nursing

Professor Joyce Kenkre chairs the
[Community Nursing Research Strategy for
Wales Board](#) (originally convened as part of
Wales School for Primary Care Research
activities) with support from Dr Carolyn
Wallace, Reader in Integrated Care at
University of South Wales and PRIME Work
Package Lead. Backed by the Chief Nursing
Officer for Wales, the Board comprises
members from all over Wales and includes
representation from the disciplines and
stakeholders included in the strategy:
community practitioners, academics,
researchers, the Royal College of Nursing,
and the health board Directors of Nursing in
Wales.

The Board has been very active in
facilitating capacity building in community
nursing research in Wales, often travelling
to clinical teams on-site at their health
boards to conduct Research Masterclass
workshops (Betsi Cadwaladr Health Board,
26/06/2015); and individual meetings with
teams on becoming more research active,
and taking research ideas forward to
funding applications.

Such activities have proven key in
developing community nursing research
capacity. For example, through these
activities, Joyce Kenkre informed the nurses
and the Research & Development Office at
Powys of an opportunity to be involved as a
recruitment site for Epilepsy Nurse Trial for
Adults with Learning Disabilities (EpAID)
study.

The research team in Powys were completely new to research and required a lot of support from the Health and Care Research Wales Workforce and Powys R&D Department, but they successfully managed to recruit to both time and target, and received an award in recognition of this at the annual Powys Teaching Health Board Excellence Awards, April 2016 (pictured opposite).



Another example of developing research capacity is the **Family Resilience Assessment Instrument and Tool (FRAIT)** study. This has been developed in collaboration with Abertawe Bro Morgannwg and Hywel Dda Health Boards, University of South Wales and PRIME. This study originated from a community nursing research strategy capacity development workshop in ABM, led by Dr Carolyn Wallace, where the senior nurses identified that they wanted to validate an **assessment tool for health visitors** across Wales, based around the concept of family resilience. Health visitors across Wales have been involved in Group Concept Mapping and simulation of the FRAIT. It will be tested in practice in ABM, Hywel Dda, Aneurin Bevan and Cwm Taf Health Boards, aiming to be used in practice across all of Wales from Autumn 2016. The resulting FRAIT is a new and standardised way for health visitors to assess family resilience in practice.

Welsh Ambulance Service

We engage closely with the Welsh Ambulance Service Trust (WAST) on the

design and delivery of research studies and on the development of research capacity among WAST staff. During this reporting period, together with WAST we were successful in winning two research grants from the Health and Care Research Wales Research for Patient Benefit funding stream; the WAST R&D lead (Nigel Rees) is CI on these studies (see above – ‘TIER’), with close collaboration and academic input from PRIME members at Swansea and Cardiff Universities. We also collaborated with WAST on the development of the successful bid to NIHR HS&DR for the ERA study, and a range of other projects. WAST have supported the development of a programme of work on **hip fracture** through a grant for the PAPHiF project. PRIME colleagues are supervising the PhD studies of two WAST paramedics, and we are also supporting the building of research capacity in WAST through the part time research support roles for paramedics in various studies. Helen Snooks is a member of the WAST R&D Forum which approves R&D involving WAST. She and other members of PRIME regularly attend these meetings and provide information and advice to WAST concerning projects and capacity building.

Primary Care

Engagement with Primary Care Strategy Lead at Cwm Taf Health Board: Adrian Edwards, Joyce Kenkre and Nick Francis are in discussions regarding developing a **research framework for the Health Board**. One ‘pathway’ project is underway concerning promotion of health literacy to support self-management of osteoarthritis, and to **manage referrals to orthopaedics**. Another project is being planned (NIHR bid, Edwards, Joseph-Williams, Snooks et al) to evaluate shared decision making in referral management from primary to secondary care, again concerning **osteoarthritis**, this time in Aneurin Bevan Health Board.

Our work on the epidemiology and avoidability of harm in primary care has formed the basis of current discussions with the Chief Medical Officer's office at Welsh Government and 1000 Lives Improvement about designing future primary care quality improvement programmes.

Oral health & primary dental care

The oral health researchers worked closely with the NHS across all areas of research. The **Community Dental Service** has been instrumental in the delivery of the "Seal or Varnish?" clinical trial. We have collaborated with NHS colleagues in working up recently submitted grant applications. Our work on the **Quality Assurance** System in Primary Dental Care has been fed back to Public Health Wales and the Office of the Chief Dental Officer. The work on skill-mix and the development of a prudent dental workforce involves direct engagement with colleagues in Primary Dental Care and the Deanery.

Social care

In October 2015 a consensus meeting was convened with interested individuals from the public, academia, government, statutory and the third sector to discuss and set social care research priorities for Wales. Lay representatives provided their valued opinions on the priority needs for research, with the conduct of the research itself, and how the outcomes should be disseminated. Engagement with the third sector was also extremely valuable, with Age Alliance Cymru canvassing 28 other third sector organisations for their priorities.

We identified the following research questions to be addressed and priorities:

1. The SSWA (Social Services and Wellbeing Act) contains a number of

key principles linked to outcomes e.g. co-production and user involvement. In what ways can research be used to monitor and capture the extent to which these principles are **changing practice and outcomes?**

2. The role of social and organisational functioning in the demand and implementation of social and health care. Develop protocols for meaningful **information sharing across the boundaries** between health and social care and between practitioners and the public.
3. What are the individual and social characteristics of **receptive/engaged service users/carers/people** and how can these characteristics be identified and nurtured?
4. Develop and evaluate new models of commissioning for health and social care which put the **service users' voice in the centre** of the frame and includes 3rd sector organisations, and uses a wide range of measures.

An **action plan** was developed and is being addressed across sectors, organisations and individuals. Introducing people to people with similar interests has particularly conducive in creating collaborations. A recent example of this is the development of a European DAPHNE bid for the development of Justice Centres to address **domestic abuse** situations, led from Belgium and the Netherlands and linking with Home-Start UK to create a centre within each of the four countries of the UK.

Joyce Kenkre continues to be active in her support of the **HomeStart initiative**, and co-authored a report in June 2015: '[The impact of volunteering on volunteers: Home-Start's volunteer impact management system](#)' which shows the crucial part that

volunteering can play in building cohesive communities based on shared experiences, values and social relationships. In particular to note the range of skills and personal experiences volunteers bring to their role and how adverse personal experiences can be used to such positive benefit. For a small but important number, volunteering is a direct and very practical way to give back to the service and community that helped them.

Examples of engagement activities in social care include:

- Policy Forum for Wales Keynote Seminar: 'Integrating health and social care - service redesign, resources and next steps for delivery', 21/10/2015, Cardiff.
Co-chaired by Dr Carolyn Wallace, PRIME Centre Wales WP Lead.
- Support provided to Integrated Care Team staff in Powys to develop Integrated Care Strategy for Healthy Living Centre (Spring 2016).
- Meetings with Prof. Fiona Verity, the new Director of Wales School for Social Care Research, Dr Dan Venables and Dr Diane Seddon to discuss the strategy, how we work with the SSCR and the current challenges with social care ethical approval processes -16th May 2016.
- Representation on the Age Cymru Gwent Board (Wallace, Vice-chair of Age Cymru Gwent)



Age Cymru Gwent meeting, January 2016

Improving public involvement and engagement

PRIME Centre Wales aims to ensure the research it supports is relevant to patients and the public, reflecting their experiences, priorities and opinions. We therefore actively involve lay members through all aspects of our work from priority setting, idea and question formulation, grant application, study conduct, analysis, dissemination and impact planning.

Involving lay members in research development

Each research application is usually supported by a research development group which involves two lay members. Within the bid timescales, we ensure their views are sought and incorporated into submitted proposals. The lay members are usually co-applicants on bids. Topics have included: decision support and cancer care in care homes; views on lung cancer and bowel cancer; improving prehospital care of patients with urgent conditions; infection management; improving delivery of primary and emergency care. For example, two lay members attended all meetings to prepare the "GPs in Emergency Departments" funding application to NIHR (HS&DR, April 2016) and were named co-applicants. They wrote the lay summary, advised on public involvement in the proposed study and made detailed comments on the research

methods. Involvement in study meetings throughout the project is fully costed. Other examples are provided in the work package sections of this report. PRIME supports identification of lay members to research development groups and funded studies. All involvement follows best practice guidelines to ensure accessibility and avoid tokenism.

PRIME has a programme of social care research prioritisation events which involve patients, carers, service providers and planners from statutory and voluntary organisations. These consensus-led processes have enabled a wide range of views to inform the research agenda. Further activities to involve public and patient members in developing the research agenda will follow in future years. Several patient and public members have become involved in PRIME's work through our [Stakeholder Faculty](#). The PRIME Centre Wales Faculty includes current and recent researcher collaborators as well as researchers who have expressed an interest in future collaborations.

We are developing an involvement model which enables lay priorities and perspectives to inform and enhance the work of PRIME members across the Centre's geography and topic diversity. This builds on the SUCCESS model developed within TRUST (Thematic Research network for emergency and UnScheduled Trauma care). SUCCESS acts as both a panel for researchers to access and a pool to seek involved individuals with the added value of the wider SUCCESS perspective.

Involving lay members in overseeing and managing PRIME

We have three lay members on the PRIME Executive Management Group who play an equal role alongside other members in all

decisions and guidance about PRIME's strategic direction. We have established and convened a Lay Involvement Subcommittee of lay and academic members to oversee public involvement in PRIME Centre Wales. The group's aim is to *ensure that public and patient involvement is **embedded** in the work of PRIME Centre Wales and lay members are **actively involved and engaged** in the Centre and all its research.*

A lay member is part of the subgroup planning the second annual PRIME meeting. We are recruiting two lay members to the PRIME Advisory Group which provides independent advice and critical comment on our work.

Building skills and knowledge

We actively support lay members to attend conferences and networking events to build their skills, knowledge and disseminate information about PRIME. We disseminate our experience of lay involvement internationally through conference presentations and workshops. For example, lay member Robert Harris-Mayes and PRIME member Bridie Evans jointly gave a plenary presentation to the South West region of the Society for Academic Primary Care annual meeting about the SUCCESS model and PRIME. Bridie Evans presented to the PreHospiten Conference, Sweden. Lay members have attended national policy and research events. The NIHR National Director for Patients and the Public in Research, Simon Denegri, gave a keynote speech at the PRIME inaugural conference (September 2015) and a workshop about public involvement was led by research and lay members. Bridie Evans was awarded her PhD; her thesis described the development and evaluation of a model for involving lay members in research linked to chronic conditions management. PRIME took part in

the Involving People Annual Meeting engagement event to make, and to strengthen existing, links with lay members.

Conclusions

PRIME activity was fostered during the application and inception phases as the WSPCR and TRUST teams came together. This process helped achieve synergy between groups which had individual excellence, and strengthened prior but somewhat limited collaborations between the four universities.

Research projects arising from planning and grant applications that took place before April 2015 by the PRIME applicants and staff are thus already underway now, **tackling key policy and priority areas** such as Prudent Healthcare implementation, emergency admission management, common infections and inequalities in cancer symptom presentation and diagnosis.

The greater **critical mass and multi-disciplinarity** across our partners now enables us to engage better with public and patient, policy-maker, NHS and social care provider, industry and third sector stakeholders, more comprehensively realising opportunities for dissemination, knowledge transfer and impact.

Primary and Emergency care is broad and generic, covering as it does over 90% of all patient contacts in the NHS. We continue to build on our **work package areas of excellence** in unscheduled care, common infections, long term conditions, patient safety, cancer diagnosis and prevention, dental and patient centred care.

All our work is based on strong values around collaboration (with partners and across work packages), multi-disciplinarity, engagement with patients, public, health

and social care providers and other stakeholders, and maximising knowledge

transfer and impact. These values are built into all research planning and delivery.

Unscheduled care and Screening, Prevention & Early diagnosis ('SPED', principally in the field of cancer to date) are perhaps the two strongest work package areas to date, with capacity and strong connections between universities (Swansea-Cardiff and Bangor-Cardiff respectively). We have therefore chosen to showcase these research areas in particular in our 2nd Annual Meeting (Wrexham, November 2016). In future years we will showcase other work packages at our annual meetings, as well as developing national and international dissemination and impact across the full range of our work.

Through this **growth in capacity, profile, and impact** across the Primary and Emergency Care domain, and conducting high quality and internationally important research on topics of national policy priority we aim to **improve the health and well-being** of people in Wales and beyond.