

Pharmacy Research Wales

“A pathway to leadership in multi-disciplinary health and care research”

5 Year Strategic Plan (2015-2020)

November 2015

Pharmacy Research Wales: 5 year strategic plan

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Forewords

All Wales Chief Pharmacists Committee (AWCPC)



The AWCPC recognise that research is fundamental to innovating and shaping the delivery of healthcare and have therefore commissioned this strategy, bringing partnership bodies together, to share a vision for pharmacy research in Wales. This strategy, in light of the overarching programmes of work of Modernising Pharmacy Careers Wales, Royal Pharmaceutical Society Faculty and national healthcare policies, sets out a pathway to engagement and leadership in research for the pharmacy professions. Whilst there is a successful history within the pharmacy professions of innovation in service design and models of care the associated research and evaluation activities have been limited. An appropriately skilled workforce practicing in a supportive environment is now required to create a step change improvement in the quality and quantity of research. Clear career pathways with appropriate integrated training and career opportunities must be established to develop our research leaders of the future. There has never been a more important time for pharmacy professionals to provide evidence of the contribution they make to the health and wellbeing of the nation. As the prudent healthcare agenda continues to gather momentum in Wales, pharmacy service providers must demonstrate that their services improve patient and public health outcomes while providing the best value for commissioners. As the strategy develops and is implemented, pharmacy professionals will increasingly engage and lead at multi-disciplinary research forums. The aim must be to generate high quality medicines related research. This will provide insight and inform key policy and operational decisions across a wide portfolio of medicines-related issues. In doing so it will provide assurance that activities planned and undertaken have a sound evidence base while enhancing the standing of the professions. The AWCPC welcome this strategy and support the principles underlying the recommendations.



Howard Rowe. FFRPS
Chair, All Wales Chief Pharmacists Committee

Royal Pharmaceutical Society (RPS)



The pharmacy profession is ideally placed working across public health, community, primary and secondary care to ensure a culture of patient safety, access to medicines and expert advice and care. This unique profile enables clinical research using or led by pharmacy to have maximum impact and reach for patient care and a wide-ranging effect on policy. Research and innovation when translated into practice are cornerstones of quality health care but

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tackling the big questions in healthcare requires a coordinated approach working across sectors and the developments and implementation of evidence at all levels. By creating a research informed and enabled pharmacy workforce and supporting infrastructure this strategy will build on the excellent pharmacy research leadership already apparent in Wales and create a culture of research excellence across the country. Promoting the role of the pharmacist, supporting research career pathway development and highlighting the benefits of research in pharmacy will build the evidence base for pharmacy services and care delivered by pharmacy professionals. This integrated approach to developing the profession and embedding research into practice and to inform future practice will greatly impact the provision and delivery of care in Wales and beyond. The Royal Pharmaceutical Society is pleased to support this vision for pharmacy research in Wales and will support the development of pharmacy as a setting for research and pharmacy professionals as research leaders.



Mair Davis. FFRPS, FRPharmS, FHEA
Director for Wales
Royal Pharmaceutical Society

Dr Rachel Joynes. MBiol, MSc, PhD
Head of Research and Evaluation
Royal Pharmaceutical Society

Cardiff School of Pharmacy and Pharmaceutical Sciences (CSPPS)



The practice of pharmacy in Wales is poised at a pivotal moment. Developments in recent years have brought about increasing realisation of pharmacy's potential to influence more than ever before the health of individuals and the population in Wales. We have witnessed the introduction of innovative new services supported by a shared commitment in all sectors of the profession in Wales to contribute to the "prudent healthcare" agenda, to work as clinical practitioners in effective multidisciplinary partnerships and to respond directly to the shifting balance in the burden of chronic disease with comorbid conditions in an ageing population. However, the need to move further and to achieve long-term and sustainable impact, requires the developing roles of pharmacists to be appropriately resourced. However, the key resource to underpin, enhance and validate these developments will be an appropriate knowledge ecology which supports the creation, synthesis and transfer of new knowledge in medicines optimisation, health outcomes, service delivery and the pharmaceutical basic sciences. The School of Pharmacy and Pharmaceutical Sciences at Cardiff University welcomes the launch of this pharmacy research strategy for Wales as part of the essential infrastructure to support the further impact of pharmacy on the health of the nation. As the only school of pharmacy in Wales, we are conscious of our unique role in the education and training of

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pharmacists – as undergraduates and as life-long learners – but more particularly we wish to contribute to enhancing a research culture in the profession. Many of those entering the profession in Wales are graduates of this School who have already experienced the benefits of research-informed teaching, and all have acquired research skills and participated enthusiastically in research projects as undergraduates. The challenge for the profession is to build on the enthusiasm of early career pharmacists and to orientate the practice of all pharmacists so that systematic evidence gathering is embedded within daily practice and policy development. In the last national audit of research in the UK (REF2014), Cardiff University was ranked fifth among all the universities in the UK for the quality of its research. This School was placed in joint first position among the UK schools of pharmacy, with the societal impact of our research highlighted particularly. Thus, the School is well positioned to support this important agenda and looks forward to working in partnership with the profession in Wales.



Professor Gary Baxter. BPharm, PhD, DSc, FRPharmS, FBPhS, FHEA
Head of School, Cardiff School of Pharmacy and Pharmaceutical Sciences

Community Pharmacy Wales (CPW)



We all know that pharmacy can add value through better outcomes and improved patient care, but we need to get better at documenting evidence of the value we can deliver. We need a future where research is embedded in to routine pharmacy practice, which influences and informs local and national policies to support the extended role of the pharmacist. Research should never be seen as an end in itself. It needs to have a purpose, and one that matters to patients, carers, ordinary practitioners and those who commission pharmacy services, including Welsh Assembly officials, politicians, and NHS Wales leadership at a national, regional and local level so that investment decisions and change can be made on a sound evidence base. Pharmacy research can support new services and new ways of improving patient care. It can be used to improve the way existing services are provided, improving effectiveness, efficiency, patient safety and patients' experiences. Audits, evaluations and health economic analyses are vital activities which can support this research agenda. Community Pharmacy Wales is pleased to welcome this five-year strategy to underpin pharmacy research in Wales. We urge all pharmacy contractors to consider how they can be involved in research to demonstrate and showcase community pharmacy's contribution to the health and wellbeing of the population in Wales.



Mark Ireland. MRPharmS, Dip Clin Pharm, MBA (Retailing)
Chair, Community Pharmacy Wales

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Executive Summary

Mission: To develop a lasting culture within the pharmacy professions which will create a step change improvement in the quality and quantity of research that influences practice and policy to benefit the health of the people of Wales and beyond.

This strategy is led by the All Wales Chief Pharmacists Committee and is the product of a wide reaching consultation process both within and outside of the pharmacy professions. The strategy supports a key aim of the Committee, which is shared throughout the pharmacy family and NHS in general, to develop a highly skilled workforce of trained clinical researchers enabling them to respond to the exciting opportunities now presenting themselves.

Multi-disciplinary research is essential for the rapid adoption and diffusion of the best, transformative and most innovative ideas, products, services and clinical practice. The recommendations made in this document represent the first necessary steps in increasing the capacity and capability of pharmacy professionals in Wales to support, and eventually lead, multi-disciplinary research in health and care, particularly relating to medicines safety and use.

The strategy sets out recommendations for a more flexible career structure that will combine clinical and research work as routine for those pharmacy professionals who wish to pursue a research career, rather than obliging them to pursue one role at the expense of the other. This will require the provision of integrated training and qualification opportunities together with strong research leadership at national and local levels and a clinical research environment supportive of individuals wishing to pursue research careers at all levels.

The strategy sets out 17 recommendations grouped into 4 themes as shown below, which emerged from consultation. These recommendations, when successfully implemented, will deliver the mission underpinning the strategy. A proposed high level delivery plan is also presented in Appendix 1.

1. **Culture:** Create a culture in which pharmacy professionals recognise the importance of pharmacy research to the health of the nation and the future of the profession.
2. **Workforce:** Develop a flexible and future-proof workforce where research for patient benefit is at the centre of practice.
3. **Knowledge Sharing:** Support the dissemination and application of knowledge through the development of communication infrastructures and lasting partnerships.
4. **Research Priorities:** Identify and prioritise emerging research themes for Pharmacy Wales which improve patient outcomes.

Research Strategy Steering Committee

Sarah Hiom (Chair), David McRae (Deputy Chair)

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Steering Committee

Chair	Dr Sarah Hiom	Cardiff and Vale University Health Board
Deputy Chair	Mr David McRae	Cwm Taf University Health Board
Members:	Mr Richard Boldero	Abertawe Bro Morgannwg University Health Board
	Mr Robyn Davies	WSPCR and SEWAHSP*
	Mrs Janet Gilbertson	Cwm Taf University Health Board
	Mr John Harris	Abertawe Bro Morgannwg University Health Board
	Dr Karen Hodson	Cardiff School of Pharmacy and Pharmaceutical Sciences
	Dr Louise Hughes	Cardiff School of Pharmacy and Pharmaceutical Sciences
	Professor Dyfrig Hughes	Bangor University
	Dr Delyth James	Cardiff School of Pharmacy and Pharmaceutical Sciences
	Ms Sian Jones	Betsi Cadwaladr University Health Board
	Mrs Michele Sehwat	Abertawe Bro Morgannwg University Health Board
	Mr Kevin Smith	Powys Teaching Health Board
Reference	Mrs Margaret Allan	Welsh Centre for Pharmacy Professional Education
Group:	Ms Beth Allen	Royal Pharmaceutical Society
	Mr Darrell Baker	Cardiff and Vale University Health Board
	Mr Paul Gimson	Public Health Wales
	Professor M Gumbleton	Cardiff School of Pharmacy and Pharmaceutical Sciences
	Mr Mark Ireland	Community Pharmacy Wales
	Dr Rachel Joynes	Royal Pharmaceutical Society
	Professor Joyce Kenkre	University of South Wales
	Mr Chris Martin	Bevan Commission
	Professor Peter Noyce	Modernising Pharmacy Careers (England)
	Professor Roger Walker	Chief Pharmaceutical Officer, Welsh Government
	Professor David Wright	University of East Anglia

* Wales School of Primary Care Research and South East Wales Academic Health Science Partnership

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Terminology

Term	Definition	Use in this document
Research	<p>The attempt to derive generalisable new knowledge including studies that aim to generate hypotheses as well as studies that aim to test them.</p> <p>Designed to: Test a hypothesis and/or identify and explore themes following established methodology.</p>	Where reference is made within this strategy to 'research', it includes projects which fit the definitions of research and service evaluation which are executed using systematic and rigorous methodology.
Service Evaluation	<p>Designed and conducted solely to define or judge current care.</p> <p>Designed to answer "What standard does this service achieve?"</p>	
Clinical Audit	<p>Designed and conducted to produce information to inform delivery of best care.</p> <p>Designed to answer: "Does this service reach a predetermined standard?"</p>	

Defining Research: A guide to understanding research and research development. NISCHR Research Ethics Service. Welsh Government. [http://www.wales.nhs.uk/sites3/Documents/952/RES_Defining_Research_Sept_2013.pdf]. Accessed June 2015

* Quality Improvement also falls outside the scope of this strategy

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Mission

To develop a lasting research culture within the pharmacy professions which will create a step change improvement in the quality and quantity of research that influences practice and policy to benefit the health of the people of Wales and beyond.

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Introduction

This document presents a 5 year strategic plan for pharmacy research in Wales and aims to provide a sustainable infrastructure for the development of a research active workforce in pharmacy.

The NHS in Wales is currently facing unprecedented challenges with changes in patient healthcare needs, fragmented services and increased technology all at a time of austerity. Welsh Government's vision, however, is to provide improved health for everyone, a better patient experience and improved quality and safety of healthcare provision by empowering patients, reducing barriers between services and service providers and by following prudent healthcare and co-production principles. These can only be achieved by radical solutions and involvement of the current and future healthcare workforces. Pharmacy has a huge contribution to make to the delivery of new care models with research being vital in providing the evidence needed to support these transformational changes. The pharmacy research workforce must be ready to meet these current and future demands.

The 3,000 pharmacy professionals in Wales are pivotal in the design and delivery of pharmaceutical care services. As experts in medicines, they contribute at all stages of medicines use within the health system such as clinical and patient-facing roles through to aspects of technical service provision and financial control. The pharmacy team, in particular community pharmacy, are often the first port of call for minor ailments and are critical in helping our population feel reassured and supported in all aspects of their use of medicines.

While medicines remain one of the most important interventions in modern healthcare, with Wales spending over £800 million on prescribed medicines each year, it is recognised that there is considerable room for improvement in the way medicines are used. For example:

- approximately 30-50% of patients with chronic conditions do not take their prescribed medicines as directed resulting in avoidable ill health and economic losses to society and the NHS¹, and
- around 6% of hospital admissions arise from adverse drug reactions.²

This strategy therefore seeks to bring the pharmacy workforce into the evolving and vibrant research culture within the NHS, to create equity in the research training opportunities available to pharmacy professionals and to harness the unique, patient-focused perspectives that pharmacists can bring to medicines use research. In doing so, this strategy is aligned with the current vision for the NHS workforce and the Prudent Healthcare agenda. The strategy also complements the Welsh Government's *Together for Health* vision for the NHS in Wales, the National Institute for Social Care and Health Research's *Together for Research and Innovation* strategy 2012-2015 and the Welsh Pharmaceutical Committee's *Your Care, Your Medicines: Pharmacy at the heart of patient-centred care* vision for the pharmacy resource in Wales.

1. World Health Organization. *Adherence to long-term therapies; evidence for action*. 2003. WHO.

2. Pirmohamed, M. et al. *Adverse drug reactions as cause of admission to hospital: prospective analysis of 18,820 patients*. *British Medical Journal* (2004); 329:15-19.

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Process

A research engagement event, funded by the South East Wales Academic Health Science Partnership and the Wales School of Primary Care Research was held in May 2014, with the aim of bringing partnership bodies (below) together to share a vision for pharmacy research in Wales. Delegates were encouraged to recognise the challenges ahead and consider their role in bringing about the changes required. It was acknowledged that Wales needs to build research capacity and capability, that this will take time and strong partnerships and that a co-ordinated strategy with shared goals would help to underpin these developments for the professions. Four key themes were developed from consensus workshops:

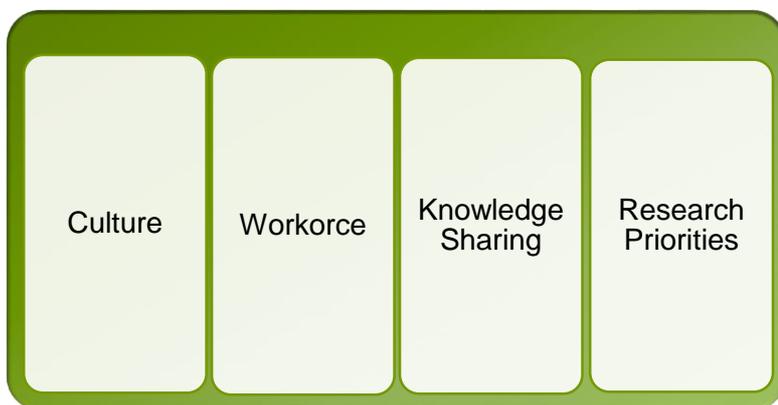


Figure 1. Four key themes of the research strategy

Partnership bodies :

- Cardiff School of Pharmacy and Pharmaceutical Sciences (CSPPS)
- Wales Centre for Pharmacy Professional Education (WCPPE)
- Welsh Government (WG)
- Welsh Pharmaceutical Committee (WPhC)
- Community Pharmacy Wales (CPW)
- Royal Pharmaceutical Society (RPS) London
- Royal Pharmaceutical Society (RPS) Wales
- Other academic departments
- Other health care professionals
- Workforce, education and development services (WEDS)
- Building research capacity for nursing and allied health professionals (RCBC Wales)
- Division for Social Care and Health Research (DSCHR)
- Association of Pharmacy Technicians UK (APTUK)
- Association of the British Pharmaceutical Industry (ABPI)
- Welsh Medicines Resource Centre (WeMeReC)
- All Wales Medicines Strategy Group (AWMSG)
- Research delegates

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1. Culture

Objective 1: Create a *culture* in which pharmacy professionals recognise the importance of pharmacy research to the health of the nation and the future of the profession

Historically there has been a lack of research focus in pharmacy practice. There is now a need to create a strong research culture, which values and rewards meaningful research, to underpin the profession's engagement in improving patient outcomes and experience and enhancing the health service. Evidencing improvements in patient outcomes is essential to demonstrating the value of pharmacy services to health care planners, commissioners and the population. This will be achieved by implementing the following recommendations:

1.1 Communicating the impact of clinical research

Research conducted by pharmacy professionals into pharmacy practice has led to transformations in UK healthcare policy and health service delivery.^{3,4,5} The significance and impact of this research in creating improvements in the development, delivery, and sustainability of high quality cost effective care needs to be presented clearly to members of the profession and wider audiences.

Recommendation 1:

Communicate the value of pharmacy research in enhancing patient outcomes and service productivity to pharmacy professionals and the wider audience, including patients and the public

1.2 Organisational and departmental engagement

Research must become integral to the way pharmacy organisations and departments operate, being recognised in operational plans and departmental agendas as core activity. An ethos must be fostered which rewards the objective, systematic and unbiased assessment of pharmacy practice and medicines use through the application of research methodologies and the evidence it can provide. Links must be created with relevant departments and organisations such as Health and Care Research Wales, Division for Social Care and Health Research (DSCHR) and thematic research centres and units where multi-disciplinary activities are supported and encouraged.

Recommendation 2:

Embed research as core activity to inform change

3. Bond, C.M., Matheson, C., Williams, S., Williams, P. Repeat Prescribing: An evaluation of the role of community pharmacists in controlling and monitoring repeat prescribing *British Journal of General Practice*; 2000;50;271-5
4. Bojke C, Gravelle H, Hassell K, Whittington Z. Increasing patient choice in primary care: the management of minor ailments. *Health Econ*. 2004 Jan;13(1):73-86.
5. Community Pharmacy Wales. Evaluation of the discharge medicines review service. March 2014. Accessed October 15 [http://www.cpwales.org.uk/Contractors-Area/Pharmacy-Contact---Services/DMR/DMR-Evaluation_Final-Report_13082014.aspx]

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1.3 Local leadership, mentoring and role models

The recent surge in interest among practising pharmacists in research and evaluation, stimulated by the launch of the Royal Pharmaceutical Society (RPS) Faculty and the appointment of Wales' first consultant pharmacists, must be sustained and opportunities for personal development in research skills and evidence translation must be created. Local leads for research and development must be appointed and developed to facilitate local research activities such as fostering research collaborations, identifying and prioritising research questions, advertising sources of funding and assistance with grant applications.

Recommendation 3:
Establish local research leadership roles

1.4 National leadership

Wales needs high profile pharmacy research leaders who can "champion" pharmacy research in Wales. These individuals would have credible clinical research profiles (for example in publishing and attracting grants), would be likely to hold professorial positions and would have close working relationships with service provider leaders. Such research leaders would act as role models and be the voice of pharmacy research in Wales at a national and international level, creating opportunities for funding to come into Wales and for Welsh practitioners to participate and engage in research.

Recommendation 4:
Establish Professorial leadership for
pharmacy research in Wales

Key Metrics

- Appointment of local research leads per Health Board and Velindre NHS Trust
- Establish at least one Professorial research lead post in Wales
- Research included in all Health Board 3 year integrated plans

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2. Workforce

Objective 2: Develop a flexible and future proof workforce where research for patient benefit is at the centre of practice

Opportunities for the development of a clinical researcher workforce have been available to medical and nursing professions for some time. The need to create equal opportunities for pharmacy professionals is now being recognised. There are now opportunities to develop a vision for pharmacy research in Wales. This must be supported by an appropriately skilled workforce who will have opportunities to access career pathways and relevant training programmes which combine research with clinical practice. A research-active workforce in Wales is essential to inform pharmacy's current and future contribution to the health of the population. Figure 2 illustrates five aspects of workforce which must be addressed to achieve this.

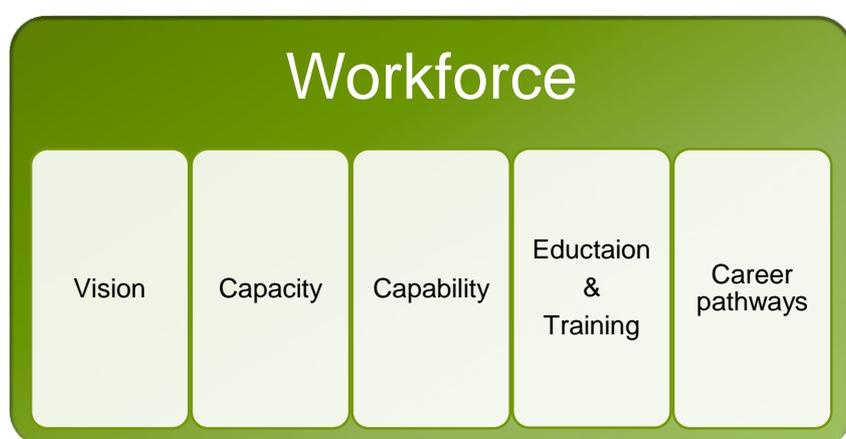


Figure 2. Aspects of the clinical research workforce

2.1 Vision for the research active pharmacy workforce

Figure 3 shows a conceptual approach for the vision of a research-active workforce and how research can be regarded as *everybody's business*.⁶ Research should be used to support all stages and types of practice. It is likely that a sector of the workforce will take a more active approach to research by collaborating or assisting others and leading on small scale projects. However, only a figurative 1% are anticipated to be research leaders who will establish meaningful programmes of research with clear routes to delivering benefits in healthcare and will be able to obtain success and excellence in both publications and grant applications. By developing pathways for our research leaders, associated opportunities will be available for interested candidates at various access points. Training, mentorship and supervision must be developed with these pathways and become established as part of the infrastructure.

6. *Putting Research at the Centre of Practice is Everybody's Business*. Beth Allen RPS. [http://medicine.cf.ac.uk/media/filer_public/4d/06/4d0639e3-9a32-4078-8aad-972dfead2189/beth_allen.pdf]. Accessed May 15

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Figure 3. Conceptual representation of the research workforce

The Research and Evaluation (R&E) cluster of the Advanced Pharmacy Framework (APF)⁷ provides a valuable benchmarking tool for aspiring researchers and should be used to map competencies during an individuals career. We recommend that this, together with other professional clinical researcher frameworks, be used to develop a competency framework specifically for pharmacy clinical researchers.

Recommendation 5:

Establish a vision and career pathways for the research-active workforce

Recommendation 6:

Establish a competency framework for clinical researchers

While the focus of this strategy is on research, it is recognised that other associated service development activities, such as audit and quality improvement projects, will build early skills and attitudes towards research and will assist in understanding and identifying important research questions. By seeking to improve the capacity and capability of the pharmacy workforce to conduct research, it is envisaged that the application of newly acquired research skills and experience will have a positive effect on the quality of audits and service improvement projects. However, it is suggested that Wales adopts a co-ordinated approach to training and outputs in these areas, developing a separate but complementary audit and quality improvement strategy. Exposure to research delivery and support activities, such as clinical trials, may also be building blocks to early research skills and attitudes.

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7. *Advanced Pharmacy Framework. Royal Pharmaceutical Society: Faculty [www.rpharms.com/faculty-documents/rps-advanced-pharmacy-framework-guide.pdf] Accessed June 2015*

2.2 Capacity

Historically, capacity for clinical research has been an issue for both the service and the educational environments. Individuals have by necessity pursued one of either a clinical or research career with the career pathways being divorced from each other.

More flexible career structures need to be recognised where clinical and academic work can be combined. Job descriptions must recognise research and job plans must ring fence research time. Award schemes and/or joint appointments must be developed which nurture and support professional development in both domains.

Recommendation 7:

Establish ways to allow career flexibility to enable combination of research and clinical practice

2.3 Capability

The clinical researcher workforce will be developed from a close partnership between clinical practice and academia. Interaction between these two communities must be facilitated with reference to University status of Health Boards, where appropriate. An integrated clinical research training programme is recommended to provide the skills required in clinical research. Host organisations (academic and clinical) will be expected to demonstrate appropriate supervision, management, support arrangements and evidence of a clinical researcher career infrastructure which supports the candidate beyond any training programmes, as in Figure 4.

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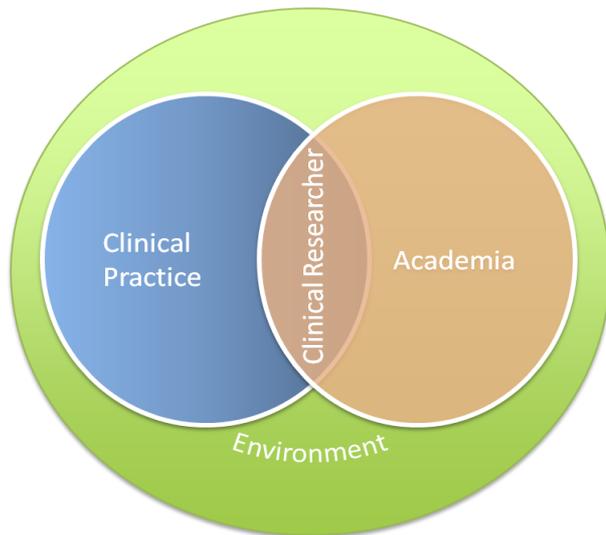


Figure 4: Links between academia and practice to develop clinical researchers

Recommendation 8:

Establish well articulated systems of mentoring and peer support for clinical researchers and educators

2.4 Education and training

It is essential that a clear, transparent and flexible training programme is available. In England, Health Education England (HEE) has led the nursing and allied healthcare professionals towards an integrated clinical academic programme (ICAP), where pharmacy has recently been included as one of the supported professions. We recommend that a similar system is developed for pharmacy professionals in Wales and is made available at 5 sequential and linked levels as described overleaf. These must be delivered by appropriately qualified higher education institutions (HEI) in partnership with the NHS.

We have provided indicative numbers of placements for each level and recognise that these may take time to be achieved.

Integrated clinical research training schemes currently offered to pharmacy professionals in both Wales and UK wide must be explored. Where opportunities are lacking relevant programmes must be developed.

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Recommendation 9:
Establish a co-ordinated range of
integrated research training
opportunities

The following is an example of an integrated scheme, however there may be alternative options available.

Table 1. Proposed Integrated Clinical Academic Programme based on HEE/NIHR model⁸

Level	Title	Description	Nº per year
1	Introduction to Research	First time researcher courses and stand alone research modules	12
2	Masters in Research	MSc/MRes/MClinRes/MPhil	12
3	Clinical Doctoral Research Fellowship	Doctoral Award 3 years duration or part time equivalent	3
4	Clinical Lectureship	Post Doctoral Award 3 years duration or part time equivalent Develop programme leadership potential	3
5	Senior Clinical Lectureship	Senior pre-chair/chair 3 – 5 year duration or part time equivalent Established role as research leader	1

8. ICAP- HEE/NIHR Integrated Clinical Academic Programme for non-medical healthcare professions. [<http://www.nihr.ac.uk/funding/nihr-hee-cat-programme.htm>] accessed May 2015.

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Recommendation 10

Work with appropriate providers to identify current and new research training programmes

2.5 Career pathways

Clear career pathways must be developed (see Recommendation 5) which include training and the opportunity for substantive posts. These would include joint appointments which will cement partnership agreements between HEIs and service providers. Flexibility will allow individuals to gain varying degrees of research training which will enhance any level of clinical practice. Figure 5 shows an example of a clinical researcher career pathway where this integrated pathway sits between and brings together both the academic and the clinical career pathways.

Recommendation 11:

Establish joint appointment positions for clinical researchers

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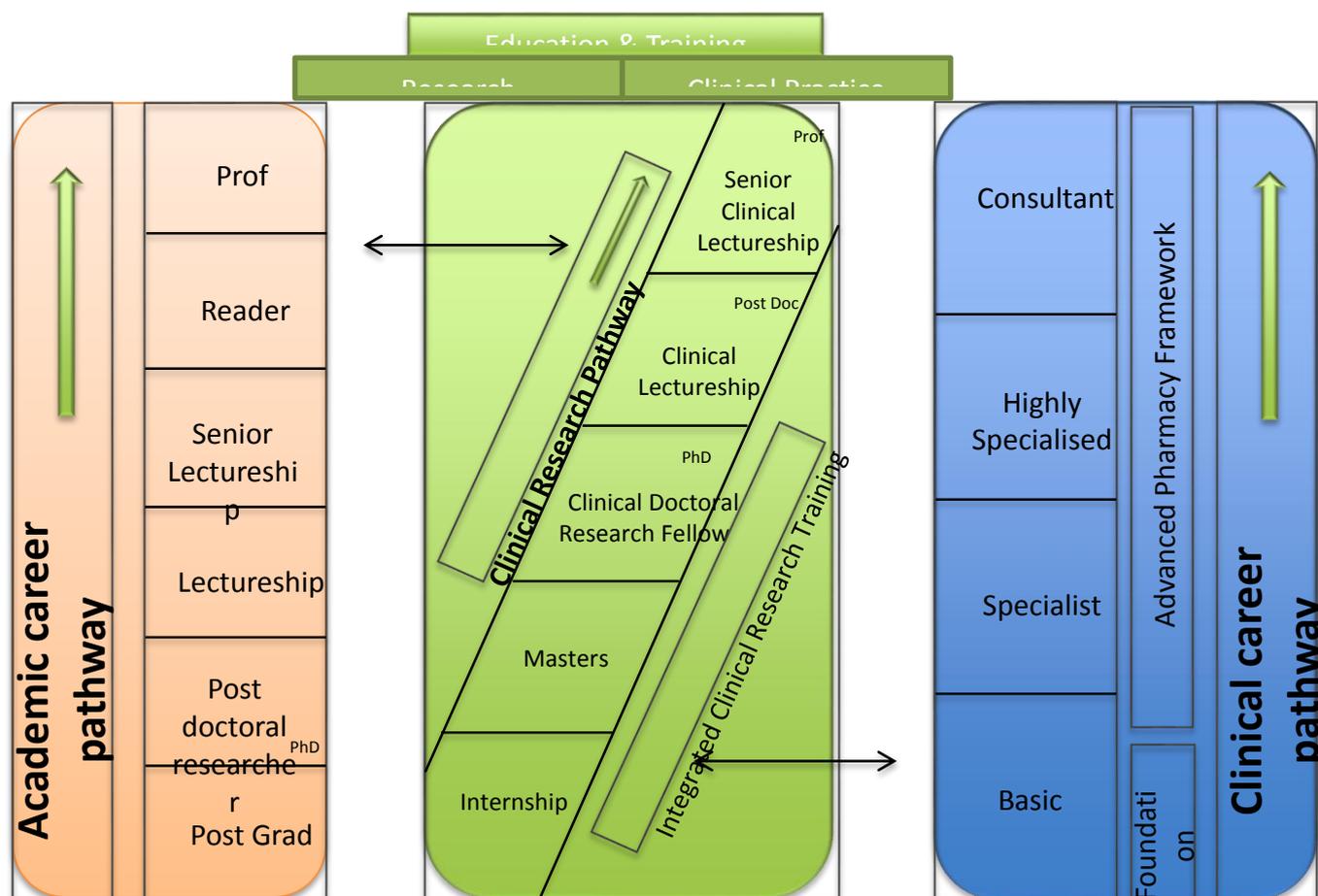


Figure 5 : Example of a clinical researcher career pathway based on a managed sector, patient facing, clinical pharmacist

Key Metrics

- Benchmark all Pharmacists in Wales against APF R&E cluster, or equivalent
- Number of Masters (MRes/MClinResMSc) per year
- Number of Doctoral Research Fellowships (PhDs) per year
- Number of Clinical Lectureships (Post Doc) per year
- Number of Senior Clinical Lectureships per year
- Number of Professorial positions per year
- Integrated clinical researcher training programme established
- Clinical researcher joint appointment posts established

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3. Knowledge Sharing

Objective 3: Support the dissemination and application of knowledge through the development of communication infrastructures and lasting partnerships

There are now opportunities to improve the infrastructure related to the dissemination of new knowledge and the application of that knowledge into practice and policy. Pharmacy clinical researchers must be encouraged to work collaboratively, must be supported to publish their research findings and to implement these and the publications of others into policy and practice. A structured dissemination of created knowledge will decrease the potential for duplication of efforts, increase the understanding of areas that need to be researched and increase the ability of departments to evaluate and implement this new knowledge into practice, embracing the culture of evidence-based practice.

3.1 Communication and partnerships

The sharing of knowledge is essential to increase good practice and prevent duplication of effort. However, this is difficult without the appropriate communication infrastructure. We suggest the establishment of an electronic platform to facilitate two-way communication between active partners and the research community, housing a live activity database with interactive discussion forums and functionality for "following" research areas.

Opportunities to build a community of researchers within a supportive infrastructure must be explored. This may take the form of electronic platforms for communication, face-to-face engagement events and the use of other research organisations across Wales (such as Health and Care Research Wales and Research Capacity Building Collaboration (RCBC)).

Interprofessional as well as intraprofessional partnerships must be encouraged and consideration given to practitioners within residential and nursing homes, the pharmaceutical industry and third sector charities in addition to those in primary care, community and hospital environments. Existing links through the Royal Pharmaceutical Society should be explored as well as partnerships with other professional bodies.

Formalised communication with HEIs will be established by building on current and new collaborative partnerships and by the establishment of joint research leadership appointments, where appropriate. These closer working relationships will build dialogue relating to shared goals and potential funding opportunities.

Recommendation 12:

Establish a robust, interactive mechanism for research collaboration and communication with partners

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Recommendation 13:
Establish an interactive live pharmacy
research activity database for Wales

3.2 Knowledge application

The application of knowledge into policy and practice, with demonstrated benefits to the patient and population of Wales, is an essential outcome of research. A precursor to this is the dissemination of research outcomes from one part of the organisation to another. Researchers must be encouraged to present at conferences and publish in peer reviewed journals, where consideration is given to the journal relevance, impact factor and reach to local, national or international audiences.

Recommendation 14:
Encourage, support and co-ordinate
publication of research outcomes

Recommendation 15:
Apply published research into practice and
policy

3.3 Research Strategy Implementation Group

We recommend the establishment of a research strategy implementation group consisting of representatives from the partnership bodies. Mechanisms to manage the following will be established:

- delivery of the strategy;
- key metric assessment and reporting on the benefits of research activities to patient care;
- review, feedback and endorsement of early research proposals (with the associated assurance of quality) and
- priority theme setting.

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Recommendation 16:

Establish a Research Strategy Implementation Group to determine governance arrangements for future research and manage delivery of the strategy.

Key Metrics

- Number of quality research studies
- Income from grants for practice research
- Number of publications in journals with impact factor ≥ 2
- Number of publications in journals with impact factor ≤ 2
- Capture publication star rating (REF)
- Impact assessment of research (to evolve with REF 2020 metrics)

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4. Research Priorities

Objective 4: Identify and prioritise emerging research themes for Pharmacy Wales which improve patient outcomes.

In order to progress a high level research strategy there is a need to co-ordinate research efforts and facilitate the gathering of knowledge in a progressive and focused manner. We must facilitate joined up thinking between the different sectors of pharmacy, other healthcare professionals and policy makers and invest in a process to establish Welsh research priorities which can be driven by the natural partnerships formed from aligning goals.

Setting the strategic direction for pharmacy research Wales will be a complex process which must take the following into consideration:

- the visions being set for the pharmacy profession (and healthcare as a whole) by strategy and policy from the professional sector leads and government
- local practice-based knowledge gaps.

An awareness of the timescales for establishing a credible research collaboration together with aligned HEI goals must be considered. Partnership bodies must work together to establish these long-term objectives and focus.

The engagement event in May 2014 provided the opportunity for attendees and their representative bodies to present areas of current interest. These have been collated and are presented in Appendix 2.

The research strategy implementation group will facilitate these discussions, reviewing strategic direction at regular intervals and reporting on the benefits that research already undertaken has made to healthcare.

Recommendation 17:

Introduce process for identifying and prioritising emerging research themes for Wales

Key Metric

- Review of research priorities

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Performance

The most important measurement will be to show how the research workforce is delivering benefits to patient care - for example through demonstrating changes to policy, guidelines or by direct interventions.

This clearly depends on a well educated workforce who have the appropriate capacity, capability and environment to carry out these activities.

The following metrics are proposed to measure progress against the strategy and will be reviewed on an on going basis as the strategy is implemented:

Key Metric	2015-16	2016-17	2017-18	2018-19	2019-20
Demonstrating benefits of doing research.		✓	✓	✓	✓
Appointment of local research leads per HB and Velindre NHS Trust		100%	100%	100%	100%
Establish at least one Professorial research lead post in Wales			✓		
Research included in all Health Boards 3 year integrated plan		100%	100%	100%	100%
Benchmark all pharmacists in Wales against APF R&E cluster - or equivalent		50%	100%	100%	100%
Number of Masters (MRes/MClinRes/MSc) per year		12	12	12	12
Number of Doctoral Research Fellowships (PhDs) per year			3	3	3
Number of Clinical Lectureships (Post Doc) per year				3	3
Number of Senior Clinical Lectureship positions per year					1
Integrated clinical researcher training programme established			✓		
Clinical researcher joint appointment posts established			✓		
Increase number of quality research studies		25%	50%	100%	
Increase income from grants for practice research			50%		
Increase number of publications in journals with impact factor ≥ 2				50%	
Increase number of publications in journals with impact factor ≤ 2			100%		
Increase accumulative star rating (REF) of publications			50%		100%
Increase number of impact assessment cases for inclusion in REF			25%		50%
Review of Welsh research priorities	✓	✓	✓	✓	✓

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Appendix 1 Making it happen - A proposed high level delivery plan

	Recommendation	Who		When
		Driver	Delivery	
1	Communicating the value of pharmacy research, in enhancing patient outcomes and service productivity, to pharmacy professionals and the wider audience	National and Local levels		On going
		AWCPC, WPhC, RPS Wales, CPW, LPF*, CPO**, Welsh Universities, AHSP***, RCBC, WSPCR		
2	Embed research as core activity to inform change	Chief Pharmacists at HB level		On going
3	Establish local research leadership roles	Chief Pharmacists at HB level		6 months
4	Establish professorial leadership positions for pharmacy research in Wales	Research Strategy Implementation Group	Welsh Universities NHS Wales	2017
5	Establish vision and career pathway for the research-active workforce	Research Strategy Implementation Group	Modernising Pharmacy Careers II Education & Training Operations group Consultant Pharmacist Steering Group	On going
6	Establish competency framework for clinical researchers	Consultant Pharmacist Steering Group	Consultant Pharm Steering Group with invited specialists	6 months
7	Establish ways to allow career flexibility to enable combination of research and clinical practice	Research Strategy Implementation Group	Chief Pharmacists at HB level Welsh Government	On going
8	Establish well articulated systems of mentoring and peer support for clinical researchers and educators	Research Strategy Implementation Group	Health Board R&D leads in	12 months

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			partnership with relevant HEI	
9	Establish a co-ordinated range of integrated research training opportunities	Research Strategy Implementation Group	HEE**** /NIHR***** Welsh Government	On going
10	Work with appropriate providers to identify current and new research training programmes.	Education and Training Operatioin group		6 months
11	Establish joint appointment positions for clinical researchers	Research Strategy Implementation Group	Chief Pharmacists in partnership with relevant HEI	12 months
12	Establish a robust, interactive mechanism for research collaboration and communication with partners	Research Strategy Implementation Group	R&D leads in partnership with relevant HEI	On going
13	Establish an interactive live pharmacy research activity database for Wales	Research Strategy Implementation Group	WCPPE	6 months
14	Encourage, support and co-ordinate publication of research outcomes	Research practitioners R&D/E&T leads Chief Pharmacists at HB level Relevant HEI's		On going
15	Apply published research into practice and policy	R&D leads Chief Pharmacists at HB level		On going
16	Establish a Research Strategy Implementation Group to determine governance arrangements for future research and manage delivery of the strategy.	AWCPC	Research Strategy Steering Committee	3 months
17	Introduce a process for identifying and prioritising emerging research themes for Wales	Research Strategy Implementation Group		6-12 months

* LPF - Local practice forum

** CPO- Chief Pharmaceutical Officer (WG)

***AHSP - Allied Health Science Partnerships

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**** HEE - Health Education England

**** NIHR - National Institute for Healthcare Research

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Appendix 2 - Research priority areas of current interest

1. Quality and Safety
2. Pharmacy Service Design and Delivery
 - a. Prudent Healthcare
 - b. Patient engagement
 - c. Integration within healthcare team
 - i. Community-based care delivery
 - d. Optimisation for complex healthcare needs
 - i. Long-term conditions
 - ii. Dementia
 - iii. Care of the elderly/polypharmacy
3. New Technology/Medicines
4. Pharmacy Professionalism

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To find out more about the Pharmacy Research Wales - 5 Year Strategic Plan or obtain further copies,
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