

Cardiff School of Pharmacy and Pharmaceutical Sciences
Medicines Optimisation and Healthcare Outcomes Strategy

1. Medicines Optimisation and Healthcare Outcomes Group

The Group aims to integrate and advance Cardiff's portfolio of health research towards the benefit of patients and their families. The Group's activities will deliver discoveries that reduce health inequalities and improve population health and wellbeing in Wales and beyond through high quality research, innovation and engagement.

The Group will conduct inter-disciplinary research spanning the full translational spectrum of medicines optimisation and healthcare outcomes including: (i) Designing, developing and testing services and therapeutic interventions to improve population health and reduce health inequalities ; (ii) Exploring the complexity of contemporary health and medicines related issues across the boundaries of health and non-health disciplines and (iii) Addressing the biological, environmental and social determinants of health and wellbeing.

Over a ten year period from launch, the Group will develop strategic collaborations with national and international partners toward attaining and sustaining international leadership and excellence in research focused on health service innovation, patient safety, integrating science into practice and education.

Our Ambition:

We will provide a rigorous evidence-base for the safe and effective use of medicines leading to improvements in the health outcomes of patients and the population. The pathway to such benefits will be mediated by involving patients and users in the development through to the dissemination of our research, by influencing relevant stakeholders and in the education of future health professionals.

2. Our focus

Research in this group is aligned with wider strategic initiatives such as the Pharmacy Research Wales five year Strategic Plan. This includes building a research portfolio which facilitates wider recognition of the importance of pharmacy research to the health of the nation and the future of the profession. Underpinning our research is a commitment to knowledge sharing, building research capacity and developing/supporting the research workforce. We are interested in generating innovative research ideas, developing research proposals, running and disseminating research projects, engaging in service evaluations and quality improvement projects, as well as investigating the practicalities and science of implementation of innovation. We wish to retain, and build upon, the strengths of what is already being done well, as well as testing out new ways of working. This includes investigating the complex relationship between existing and new interventions in pharmacy practice. Our focus is in the following key areas:

2.1. Health Service Innovation

We will work with patients, practitioners, health service providers and commissioning bodies to develop and evaluate health services affecting pharmacy and medicines use that deliver improved

patient outcomes and reduce health inequalities. Our interests include the innovative and effective use of technology in health care, evaluating new roles for pharmacists, identifying ways of enhancing inter-sector communication and ensuring value for money in health care services. Work has included methods of enhancing secondary-primary care medicines communication at hospital discharge using new technology, assessing the role and potential of pharmacist prescribers, evaluating new roles for community pharmacists within the primary health care team, identifying methods to reduce medicines' waste, influencing prescribers to prescribe more appropriately and to engage in more effective consultations.

2.2. Patient Safety

We will explore the uses and effects of medicines in patients and the population in order to optimise the safety and efficacy of medicines and improve health outcomes. Our current focus is on projects implementing and evaluating systems of pharmacovigilance, developing systems to ensure medicines safety and optimizing medicines use in complex patients. Projects have included investigating the pharmacist's role in pharmacovigilance, the safe preparation of complex products such as parenteral nutrition and ensuring safe and appropriate medicines use in vulnerable patient groups such as in patients with Parkinson's Disease, those in care homes or in patients on multiple medications (polypharmacy).

2.3. Science into Clinical Practice

We will bring basic science research knowledge into clinical practice through the development of translational projects investigating the feasibility, acceptability and impact of basic science knowledge on patient care. These interests include public perceptions of basic science technologies, patient acceptability of new methods of drug delivery and enhancing the potential of new methods of drug delivery through closer alignment with clinical practice. Previous and current research has included patients' attitudes to stem cell research, evaluating patient use of inhalers to ensure optimum inhaler use and developing appropriate drug targets for the use of microneedles in collaboration with clinical practitioners.

2.4. Education and Workforce Development

We will support the education and development of pharmacists and related healthcare practitioners to deliver effective inter-professional care within and across health settings to support patients and their families address their health needs. This work addresses research underpinning the development of the pharmacy workforce, the relationship between pharmacy and the wider multi-disciplinary team and the development of innovative educational support to enhance the pharmacist's role. Our research has explored the role of different health care professionals making prescribing decisions in primary care, developing innovative placement opportunities to equip graduates with the skills needed for a changing role, investigating the relative impact of different models of inter-professional learning or pharmacist prescribing and developing resources providing feedback and support for practicing health care professionals.

3. Dissemination, Outcomes and Impact

In addition to publishing and disseminating research findings, our research will produce other outcomes which, in the spirit of knowledge-sharing, will be freely available to the research

community and the public wherever feasible. While our aim is to improve the health of patients in Wales and the population more widely, this improvement will be mediated through a wide range of approaches and intermediate outcomes:

- Guidance or toolkits for service development
- Professional guidance or strategies
- Government documents, policies and circulars
- Quality frameworks or models of best practice
- Educational resources to enhance teaching and learning
- Professional and policy recommendations
- Agenda setting and research priority exercises
- Preliminary or pilot studies that inform a larger trial

We will use a variety of approaches to disseminate our research to include the use of project websites and professional, educational, patient and policy networks; by maximising the role of social media such as Twitter and Facebook; by publishing in academic peer-reviewed journals as well as in professional and policy media; through presentations at national and international conferences; and through the use of media events and press releases. Through these approaches we will achieve research, economic and societal impact resulting in benefits to the education of health care professionals, improved public perceptions of health care and, ultimately, better patient outcomes.