

Pharmacy professionals should ‘seize the day’ by getting involved with the BioDrive AFS study to further their research expertise

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Pharmacists have expert knowledge of medicines whilst pharmacy technicians ensure medication is used effectively (1). Both roles are involved in research, primarily in secondary care clinical trial units. This could include undertaking activities such as ensuring research protocols are adhered to and Investigational Medicinal Products (IMP) are used safely (2). Beyond this, there are opportunities to participate in specialist clinical research roles. Research is included as elements of the Royal Pharmaceutical Society (RPS) Core Advanced Curriculum (3), within the four pillars of advanced practice (4), RPS Advanced Pharmacy Framework (5) and the RPS Consultant Pharmacist Curriculum (6). Alongside these, the RPS have a guidance and support site (7) and the NIHR has resources for research in the community (8). There are also nine e-learning modules (9), developed by the RPS funded by the NIHR. These enable pharmacy professionals to develop their knowledge and skills in research, learning various theoretical and practical elements, such as transforming ideas into research projects and proposals, research methods, and applying for funding.

Pharmacy has been identified as a key profession to be developed for research leadership roles by the NIHR via the Pharmacy Professionals Incubator (10). This is an important development by the NIHR as a leading funder for research in the UK and sends a clear signal for other research funders to listen more closely to input and ideas coming from pharmacy practice.

There are already multiple opportunities to be involved in research; particularly with the NIHR Associate Principal Investigator (API) scheme (11) including those health professionals in primary care and clinical trials pharmacists. The creation of the *Incubator* coupled with the efforts of RPS will facilitate those taking the first steps into research careers. This includes applying for fellowships via the NIHR Academy (12), grants from the NIHR (13), and Pharmacy Research UK PhD Studentships (14). The NIHR Academy has a fellowship pathway targeted at

practitioners (15), which would suit those wanting to remain in practice while developing a research career. A key development has been the 'NIHR under-represented disciplines and specialism highlight notice' under 'Research for Patient Benefit' (13), which is open for Allied Health Professionals (16). The highlight notice should circle back to pharmacy professionals in due course and would be a good opportunity for pharmacy professionals to apply collaboratively with colleagues. The NIHR Research Support Service (17) is a good starting point to help potential investigators shape their research ideas.

There is the opportunity to learn from previous research investigations specifically looking at pharmacy practice. Pilot trials testing the feasibility of community pharmacy teams to deliver new interventions, such as discussing alcohol use in medicine review services (18) or preventing depression in adults with subthreshold depression and long-term conditions (19), have been acceptable to pharmacy professionals involved. However, these schemes highlighted practical challenges, such as concerns about time to deliver (20) and the impact on core pharmacy functions (19). Researchers report positive experiences of working with pharmacy teams on studies (21), and their enthusiasm, alongside the exciting research developments in the pharmacy sector showcase how this is the ideal time for pharmacy collaboration to support research and progress pharmacy-initiated research.

Antimicrobial stewardship-related research is a space where pharmacy professionals can be involved at all levels of research leadership, planning and delivery such as the BioDrive AFS trial (22), a Phase III multicentre trial evaluating the efficacy of a biomarker-driven antifungal stewardship (AFS) strategy versus prophylactic antifungal / Standard of Care in adults undergoing intensive chemotherapy for Acute Myeloid Leukaemia, Acute Lymphoblastic Leukaemia, or High-Risk Myelodysplastic Syndrome. It is an ongoing example showcasing pharmacy professional involvement at various levels.

In the core trial team, one of the senior trial unit researchers and co-investigator (CI) is a pharmacist by training, was involved in designing the trial and is key in managing delivery of the trial. There is a CI academic pharmacist contributing to the trial management group in relation to interface with pharmacies and medicines management related trial activities. A third pharmacist acts as an important link between the trial team and the British Society for Antimicrobial Chemotherapy (BSAC), who are professional partners in delivering trial engagement and dissemination activities. And a fourth pharmacist, independent to the trial, sits on the data management and ethics committee. Arguably, such pharmacist research activity has been underappreciated to date.

Pharmacy professionals can take advantage of existing opportunities on the BioDriveAFS trial as site PIs or APIs. In this key role, pharmacists can lead the intervention implementation of the trial, which involves blood-based biomarker tests and an algorithm-driven approach to the diagnosis of invasive fungal infection.

As APIs, pharmacists can lead the trial's local implementation, ensuring adherence to its design and overseeing the primary and secondary outcome measures. Pharmacists, with their

expertise in medication management and antimicrobial stewardship, play a crucial role in handling antifungal exposure data and assessing related outcomes. Collaborating closely with a multidisciplinary team, including clinicians and researchers, pharmacists can contribute significantly to the trial's success. By leading in the BioDrive AFS trial, pharmacists not only advance scientific knowledge but also showcase their leadership in optimising therapeutic strategies for patients undergoing intensive chemotherapy while minimising the risk of antimicrobial resistance.

Few would argue that pharmacy professionals are not essential multiskilled members of clinical teams across the UK NHS. Increased pharmacy involvement will almost certainly improve the capacity, delivery, and quality of clinical research in the UK.

So, in 2024, pharmacy professionals should 'seize the day' and embrace the opportunity to do something different, get involved in research, and BioDrive may be what for you have been waiting for.

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